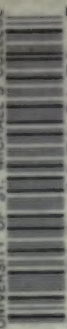


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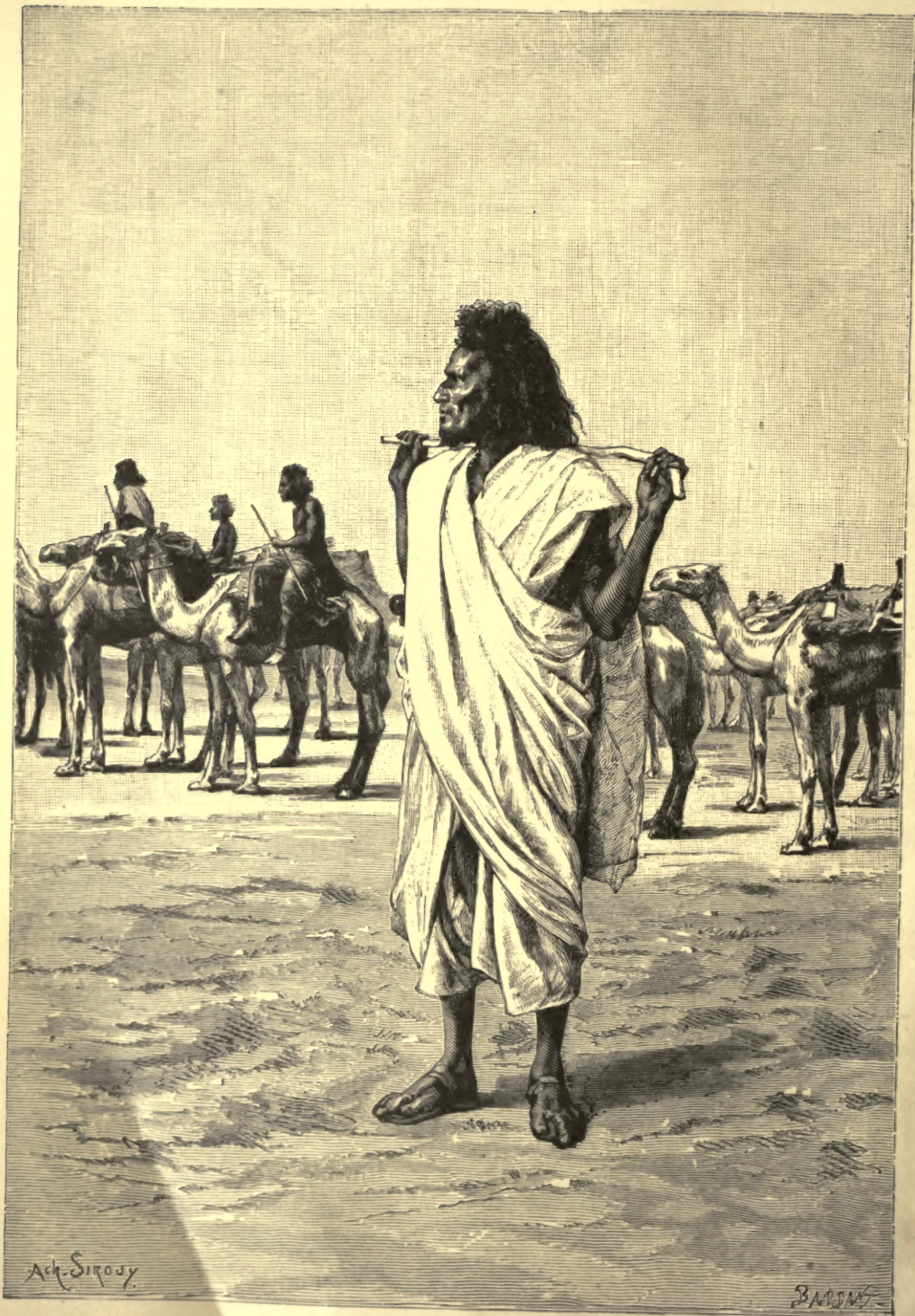


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BISHARI CAMEL-DRIVER.

THE
EARTH AND ITS INHABITANTS.

A F R I C A .

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VOL. I.
NORTH-EAST AFRICA.



ILLUSTRATED BY NUMEROUS ENGRAVINGS AND MAPS.

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THE EARTH AND ITS INHABITANTS.

NORTH-EAST AFRICA.

CHAPTER I.

GENERAL SURVEY.



FROM the very name of Africa, it is evident that down to a comparatively recent period this continent still formed part of the unknown world. It was the Libya of the Greeks, a region of undefined limits towards the south and the setting sun. Amongst other mythological or poetic titles, they also gave it the vague designations of Eskhate, or "The World's End," and Hesperia, or "Western Land," a term which was also applied to Italy, and then to Spain, and which, under the Arab form of Maghreb, has become the modern name of Mauritania. The term Africa itself, now applied to the whole continent, is of doubtful origin. Whether it designated the ancient Carthage in the sense of the "Separated," or "Colony," recalling the supremacy of the Phœnician Tyre, or whether it was a collective name of the Berbers, or only of a single tribe, that of the Auraghen or Aurigha, are questions that cannot now be solved. In any case Africa, already so named by Ennius before the second Punic war, was for the Romans at first nothing more than the Libyan neighbour of Italy, the Tunisian Tell still called Friga, a name which became gradually extended to the whole continent, just as the Asia of the Cayster Valley ultimately embraced India, Siberia, and China.

As now surveyed around its entire seaboard, Africa stands out as the best-defined division of the Old World—a vast island, attached only by a narrow isthmus,

90 miles broad, to the Asiatic mainland. Even this isthmus itself is an old marine and fluvial basin—Mediterranean alluvium in the north, a deposit of the Red Sea in the south; between these two marine zones an ancient Nilotic delta, which, to judge from the allied faunas, probably at one time communicated with the Jordan. But although the Isthmus of Suez had no existence in Tertiary times, there were other stretches of land connecting Egypt with Cyprus and Syria; for nowhere else in the periphery of the globe are there found contiguous marine inlets presenting such differences in their fauna as do those of Suez and Gaza.

But if the waters of the Indian Ocean have remained completely distinct from those of the Mediterranean since the Eocene epoch, with the exception perhaps of a shallow channel flooded in Quaternary times, the intervening barrier has at last been removed by the hand of man. Thanks to his industry, the two seas henceforth mingle their waters in the inland basin of Lake Timsah, and the circumnavigation of Africa is open to the largest vessels afloat. Compared with this southern continent, whose contour is so clearly defined, the two other divisions of the Old World seem to merge in one continental mass. Certainly the depression skirting the Ural range from the Gulf of Ob to the Caspian, and the Manich isthmus between the Caspian and Euxine, cannot be regarded as such sharp geographical parting lines as the marine channel now flowing between Suez and Port Saïd.

But however clearly severed at present from the rest of the Eastern hemisphere, Africa is not so entirely distinct from Europe and Asia as might at first sight be supposed. Parts of its seaboard were even formerly connected directly with the regions beyond the Mediterranean, and there was a time when the Atlas Mountains effected a junction across the present Strait of Gibraltar with the parallel Sierra Nevada range. Even down to the close of the Pliocene epoch, Tunisia was still united with Sicily and Italy through a broad zone, of which the only surviving fragments are the little Maltese group of islets. Greece also merged southwards in boundless plains watered by streams whose banks were frequented by the elephant and hippopotamus.*

Although now detached from Spain and Italy, North-west Africa is still in its geology, natural history, and climate essentially a Mediterranean land, forming with the opposite European seaboard a distinct physical region. Along both coasts the same fossils occur on the old rocks, while similar floras and faunas are now in possession of the soil. The Mauritanian coastlands differ far more from Nigretia, from which they are separated by the Sahara, than they do from Provence, and as already remarked by Sallust, North Africa is physically a part of Europe. Eastwards also the Ethiopian shore of the Red Sea belongs to the same formations as the opposite coast of Arabia, and a general resemblance characterises the climate, natural productions, and inhabitants on either side of Bab-el-Mandeb.

In its massive outlines Africa presents the same monotonous appearance as the two other southern divisions of the globe—South America and Australia. It is even less indented than the corresponding section of the New World; nor is it supplemented, like Australia, by a vast region of archipelagoes and islands, scattered over

* Ramsay; Zittel; Neumayr.

the northern and eastern seas. Its very size, estimated at nearly 12,000,000 square miles, or over three times that of Europe and four times that of Australia, contributes to its heavy uniform aspect. Notwithstanding its greater bulk, its coastline is considerably less than that of Europe. Exclusive of a thousand smaller inlets, such as the Scandinavian fjords and the firths of Scotland, the latter has a periphery of about 19,000 miles, the former not more than 15,000, much of which is unbroken by a single creek or bay. Its general form is that of an ellipsoid, disposed in the direction from north to south, and bulging out westwards in a still less varied semi-elliptical mass between Cape Bon and the Gulf of Guinea. The prevailing uniformity is modified on the east side chiefly by the sharp peninsula terminating at Cape Gardafui, on the west by the retreating curve of the coastline, by which the Atlantic basin is suddenly doubled in width. The eastern projection, which is separated by the Gulf of Aden from Hadramaut, follows the direction of the south-eastern extremity of Arabia, a region which in its climate and other respects forms a land of transition between the two continents.

MOUNTAINS.

From its regular contour, Africa might seem to be built on a generally uniform and simple plan. But such is not the case. Europe, notwithstanding its countless indentations, may be compared to an organism furnished with a backbone and members; Asia also groups its boundless plains and peninsulas around a culminating nucleus, the Great Pamir, or "Roof of the World;" while both Americas have their western Cordilleras, and in the east vast alluvial plains and river basins separated one from the other by scarcely perceptible parting lines. But Africa is comparatively speaking an almost shapeless mass, with a rudimentary organisation destitute alike of central uplands and regular watersheds. Nevertheless the eastern coast ranges, running parallel with the Indian Ocean, may in some respects be regarded as forming, if not a backbone, at least the border chain of one great continental highland system. Spite of the broad gaps pierced by the Limpopo, Zambezi, and Juba rivers, the broken fragments of a vast Cordillera may be recognised in the uplands stretching interruptedly from the Cape northwards to the Abyssinian highlands. In this zone of border ranges occur the culminating points of the continent, the extinct Kilima-njaro and Kenia volcanoes, perhaps the summits known to the ancients as the "Mountains of the Moon." West of these peaks the plateau is intersected by a parallel chain of other volcanoes, some of which are said still to emit smoke; while beyond Victoria Nyanza a third range, dominated by Mfumbiro and Gambaragara, would seem to form a western border system or water-parting between the Upper Nile and Congo basins. Here the plateau expands to a breadth of 550 miles, terminating northwards in the Abyssinian highlands, a rocky citadel whose base exceeds those of all the other continental orographic systems. These Ethiopian heights stand over against those of Yemen, and like them are a remnant of the border range sweeping round the Indian and

Pacific Oceans from the Cape of Good Hope to Cape Horn, and forming a vast semicircle of 24,000 miles, equal to the circumference of the globe.

Although not yet thoroughly explored, Africa is already sufficiently known at least in the main features of its general relief. More compact and less indented than the other divisions of the globe, it also remains less accessible through the

Fig. 1.—HIGHLANDS AND PLATEAUX OF CENTRAL AFRICA.

Scale 1 : 20 000 000.



work of erosion. Its mean elevation exceeds that of Europe and Asia, although there are scarcely any mountains equal to the Alps and Caucasus, none comparable to the Himalayas. Considered as a solid mass with vertical scarps and horizontal surface, its altitude, according to Chevanne, is at least 1,900, possibly 2,200, feet. An oblique line drawn from Loanda on the Atlantic to a point on the Red Sea between Suakin and Massawah marks off a region which forms an almost continuous

tableland, intersected by mountain ranges resting on foundations of from 3,000 to 4,500 feet. The Congo and Nile basins confine on the north and west this region of plateaux, which comprises about a third of the whole continent. On the other sides the border ranges are considerably less elevated and much more divided than those of South and East Africa. They are nowhere continuous, but rise in scattered fragments between the Congo and Niger, between the Nile and Lake Tsad, in the heart of the Sahara, which is broken by the two isolated masses of Tibesti and Ahaggar, in the extreme west, where the scarps of the plateaux run parallel with the coasts of Upper Guinea and Senegambia; lastly in Mauritania, where the Atlas range constitutes a distinct orographic system, formerly connected with those of South Europe. South

Fig. 2.—HYDROGRAPHY OF AFRICA ACCORDING TO MEDIEVAL GEOGRAPHERS.



of this system the continent may be roughly described as a vast plane inclined in a north-westerly direction.

RIVERS.

The rudimentary character of its general relief is also reflected in its hydrographic system. The African rivers, still to a great part entangled in the intricacies of the plateau, have a somewhat irregular and unfinished course, often forcing their way through narrow rocky gorges, and obstructed by numerous falls and rapids. Even the more copious streams are relatively less accessible to navigation than those of the other continents. In this respect the contrast is specially striking between Africa and South America, the two divisions of the globe which are more frequently compared with each other. The "Dark Continent" is entirely destitute of the great estuaries and broad arteries giving access in the New World from the Atlantic seaboard almost to the foot of the Andes. The comparative absence of navigable waters, of islands and good harbours, combined with the great extent of desert wastes, has mainly contributed to exclude Africa from the general life of the commercial world.

All the great rivers—Nile, Congo, and Niger—are interrupted by cataracts and

rapids, which cut off from outward intercourse populous regions whose fluvial systems ramify over many hundred millions of acres. The Nile and Congo rising amid the higher plateaux, where the slope is still undecided, traverse in their upper courses many great lakes, which according to a vague tradition once constituted a single lacustrine basin of enormous extent. In the sixteenth century the Portuguese explorers had some idea of this hydrographic system. But in tracing the outlines of the great equatorial lakes they seem to have rather copied older maps than relied on positive information. But, however this be, they appear to have believed in the existence of a single source for the Nile, Congo, and even the Zambesi. But the streams were also supposed to traverse extensive underground regions, and an Italian map engraved in the middle of the fifteenth century represents a Nile with three heads, separated by a vast space from the emissaries of the chief fountain. This Nile is moreover made to flow in the direction from north to south, a small Egyptian delta corresponding to a much larger delta in South Africa.

The first modern explorers of the same region were also influenced by these traditional ideas. Even Speke traced the course of four rivers issuing from various parts of Lake Nyanza to form the Nile, while Stanley made Tanganyika the source of two effluents, one flowing northwards to the Nile, the other westwards to the Congo. But although these great arteries do not rise in a common source, the water-parting between them is in some places so low and undecided that a slight disturbance of the surface would suffice to change the direction of many affluents. It is even possible that on the dividing line of some basins there may exist lakes or swamps draining in both directions.

The unfinished aspect of the central rivers, the cataracts interrupting their course, the lacustrine reservoirs scattered over the plateaux, produce a certain resemblance between equatorial Africa and the Scandinavian peninsula. But in the northern region, still under ice within a comparatively recent geological epoch, the rivers have scarcely commenced their work of erosion. The climatic conditions are of course entirely different, and although the existence of an old glacial period may be suspected even in the torrid zone, the long ages that have elapsed since that remote epoch must have effaced nearly all trace of glaciers and moraines. Hence the rudimentary character of these fluvial basins is probably due to a different cause. The climate, which was formerly much more humid in the Sahara, may possibly have been correspondingly drier in the south-eastern region of the Nyanza plateau. In the absence of a copious rainfall the rocks would remain uneroded, and the now flooded cavities unfilled by the alluvia of running waters. During its long geological life the earth has witnessed many shiftings of the climatic zones. If the rains are more abundant in some places than formerly, in others they are more rare, and the Igharghar basin, for instance, in North-west Africa, belongs to one of these dried-up regions.

East of the Nile and of the great lakes there is no space between the plateaux and the coast for the development of large streams. From the Egyptian uplands the Red Sea receives nothing but intermittent wadies, and along a seaboard of about 2,400 miles southwards to Mozambique the Indian Ocean is fed only by such



THE NILE—VIEW TAKEN FROM THE ISLAND OF PHILAE.

sluggish rivers as the Juba, Tana, Lufiji, and Rovuma. But south of the great central lacustrine plateaux the Zambezi, whose furthest headstreams rise near the west coast, drains a vast tract of country estimated at about 750,000 square miles, or nearly three times the size of France. In volume it ranks third amongst African rivers, but in length fourth only. Still farther south the Limpopo has also a considerable discharge; whereas the Orange, whose basin exceeds 400,000 square miles in extent, contributes to the South Atlantic very little of the rainfall collected in

Fig. 3.—OUTFLOW OF LAKE NYANZA, ACCORDING TO SPEKE.

Scale 1 : 1,000,000.



the gorges of its upper course. The Kunene and Koanza, which follow from south to north, although more copious, have still but a slight volume compared with their respective areas of drainage. The same may be said of the Ogowé, which rises in the peninsular tract formed by the great bend of the Congo east of equatorial Guinea.

The Niger, or "Nile of the Blacks," forms with the Nile, Congo, and Zambezi, one of the four great arteries of Africa. Even down to the beginning of this century many geographers still supposed that the Nile and the Niger mingled their

waters across the continent. Some old maps represent the latter as rising in the same lake as the eastern Nile, whereas its main source lies, not in the centre of Africa, but at Mount Loma, on the slope of the Rokelle Mountains, in the vicinity of the west coast. A space of at least 2,700 miles thus intervenes between the farthest headstreams of both rivers, while the nearest affluents are still separated by a distance of some 720 miles. The Niger in fact belongs to a region wholly different from that of the Nile in the form and disposition of its plateaux. On the other side of the hills where it takes its rise, the Congo, Rio Grande, Gambia, and several other streams flow to independent estuaries on the west coast, while farther north the Senegal, rising on the same slope as the Niger, sweeps round the hills, forcing its way to the Atlantic through a series of rocky gorges and rapids.

North of the Senegal no large river reaches the coast, and for a space of 4,800 miles from the bar of Saint Louis to the Nile delta nothing is met except a few wadies or small streams, such as the Draa, in the south of Morocco, the Moluya, Shelif, Mejerda, flowing to the Mediterranean. The Congo alone probably discharges as much water as all the other African rivers together. Next to it rank the Niger and Zambezi, the Nile in this respect taking only the fourth place.

Of the inland basins either constantly or intermittently closed, the most important are Lakes Tsad in the north, and Makarakara-Ngami in the south, both lying at nearly equal distance from the middle Congo, and thus presenting a symmetrical disposition on either side of the equator. Tsad, much the largest of the two, is also situated in the northern or largest section of the continent, the extent of both thus corresponding with that of the surrounding regions draining to the oceans. But here all further analogy ceases, at least if it be true that Tsad has always been a closed basin; for the Ngami reservoirs certainly communicated at some former geological epoch with the Limpopo and Zambezi.

Besides these central depressions, each section of the continent has its deserts, strewn with secondary basins and oases, whose waters lose themselves in the surrounding sands. Altogether the area of inland drainage is estimated by Chavanne at nearly 3,000,000 square miles, of which 560,000, or less than a fifth, lie south of the equator.* Amongst the northern tracts without any outflow there are some depressions which at present lie below sea-level. These are probably the remains of straits and inlets formerly belonging to the Mediterranean and Red Sea. The largest are those which seem to form a continuation of the Tunisian Gulf of Cades (Syrtis Minor), south of Algeria, which formerly received the discharge of the now dried up Igharghar, a river 780 miles long, and consequently longer than the

* Closed hydrographic basins of the African continent:—

NORTH AFRICA.		Sq. Miles.
Basin of the Tsad, including the Fedé		730,000
„ „ Igharghar		330,000
Other basins and waterless spaces		1,345,000
SOUTH AFRICA.		
Basin of Lake Ngami		314,000
Other basins and waterless spaces		257,000

Limpopo. Other cavities below sea-level follow in succession between the Great Syrtis and the Nile south of the plateau of Cyrenaica. At the foot of the Abyssinian highlands on the Red Sea coast are also found deep troughs, the surface waters of which have sunk to a level far below that of the neighbouring inlets. In the southern section of the continent such maritime depressions do not occur.

ISLANDS.

Africa is as poorly furnished with a complement of islands as it is with large inlets and orographic systems. In their submarine relief those in the Mediterranean belong rather to Europe than to this continent. Crete is connected with Asia Minor and with Greece; Sicily, Corsica, and Sardinia with Italy; the Balearic group by a submarine bank with the coast of Valentia; Jerba alone and a few islets in the Gulf of Gabes and along the Mauritanian shores form parts of the northern seaboard. On the Atlantic side little occurs beyond some rocks and low-lying banks, such as the Bissagos or Bishlas Archipelago, which a slight alluvial deposit or upheaval of the land would suffice to connect with the continent. The more distant groups of Madeira and Porto Santo, the Canaries and Cape Verde Islands, are of volcanic origin, and separated from the mainland by abysses over 3,000 feet in depth. Of igneous formation are also the islets in the Gulf of Guinea, Annabom, Saint Thomas, Prince, Fernando-Po, which form a chain of volcanoes all more recent than the neighbouring mainland.

The small groups in the Red Sea are mere coral reefs dominated here and there by a few volcanic peaks. Even in the Indian Ocean the only real African island is Socotra, the "spear-head" of the peninsula at present terminating at Cape Gardafui, and farther south Pemba, Zanzibar, and Mafia, disposed parallel with the coast. The Comoro Group is of volcanic origin, and Madagascar too far removed from Mozambique to be regarded as a dependency of the continent. Its nearest headland is 180 miles distant, and even this space is doubled for ordinary craft by the velocity of the intervening marine currents. Its flora and fauna also show that this great island belongs to a distinct geological domain. Geoffroy de Saint-Hilaire looked on it as a world apart, and most subsequent zoologists have regarded it as a fragment of "Lemuria," a vanished continent, which also embraced the granite groups of the Seychelles and Rodriguez as well as Ceylon and the Maldives, and may have even reached as far as Celebes in the Eastern Archipelago.

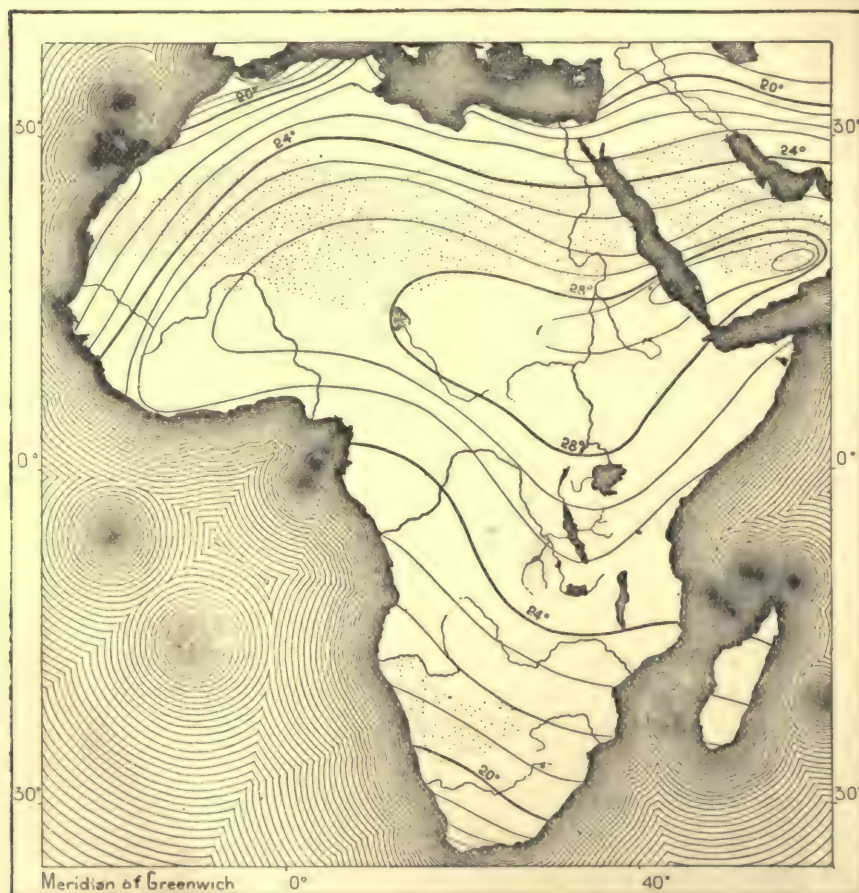
CLIMATE.

Above all the great divisions of the globe, Africa is distinguished by the general regularity of its climatic phenomena, a circumstance due to its massive form and to its equatorial position. In the region approaching nearest to the northern or southern lines of the equinoxes, rain falls throughout the year, thanks to the opposing trade winds, which by neutralising each other often preserve the stillness

of the atmosphere, and enable the local vapours to condense and precipitate themselves on the spot. In the northern hemisphere a zone of two wet seasons stretches from the equator to the fifteenth degree of latitude. In summer, copious rains are caused by the moisture-bearing south-west winds; in winter, those blowing from the north-west become in their turn the bearers of heavy rain-charged clouds to the southern hemisphere. But on both sides of the torrid zone, which comprises about seven-tenths of the whole continent, the difference in the disposition of the winds

Fig. 4.—ISOTHERMAL LINES OF AFRICA.

Scale 1 : 75,000,000.

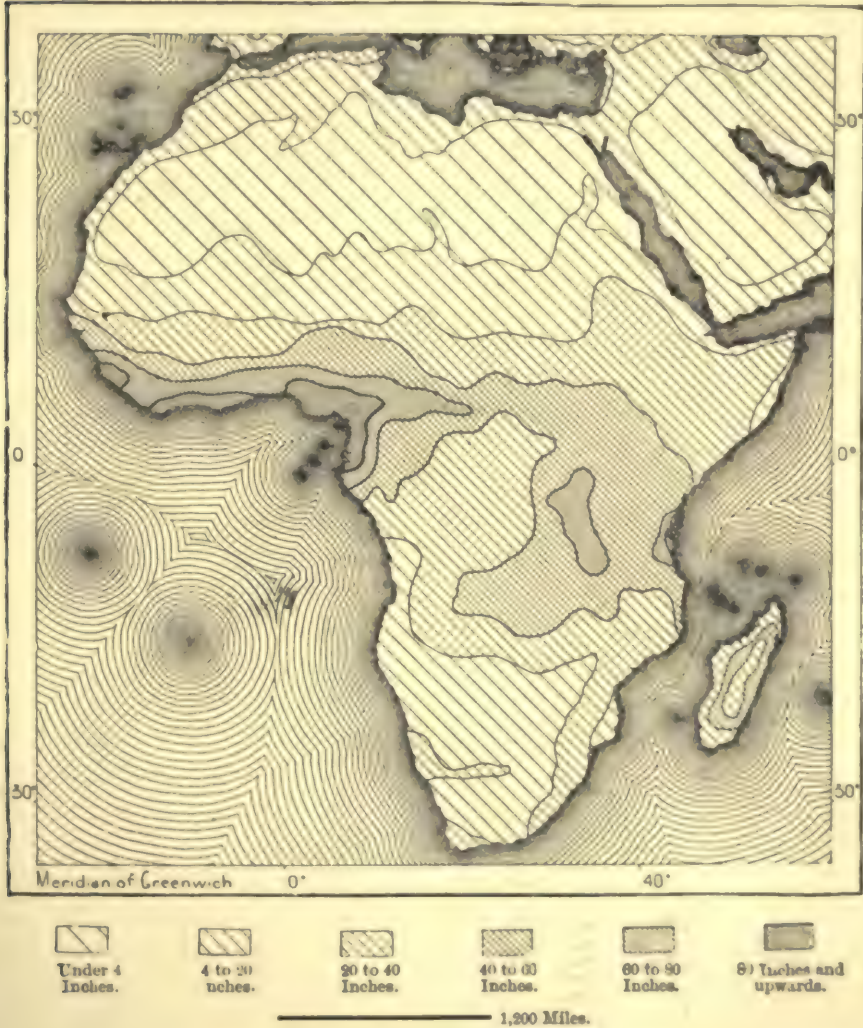


causes a corresponding contrast in the rainfall. Here the trade winds maintain their normal direction constantly, or with but slight temporary deviations; blowing from the north-east in the northern, from the south-east in the southern hemisphere, they divert to the equator most of the vapours crossing their path, leaving elsewhere clear skies and arid lands. Thus it happens that Africa has two almost completely barren zones of rocks, gravels, marls, clay and sand—the Sahara and Libyan desert in the north, Kalahari and other wastes in the south. This

symmetrical disposition of the climates is completed by the regular alternation of winds and rains in the zones of Mauritania and the Cape of Good Hope, both belonging to the region of sub-tropical rains, which fall in the respective winters of each hemisphere. Africa is thus disposed from north to south in successive grey and more or less intensely green belts, presenting to the inhabitants of the other

Fig. 5.—DISTRIBUTION OF THE RAINFALL IN AFRICA.

Scale 1 : 7,500,000.



planets an aspect perhaps analogous to that offered to our gaze by the parallel cloudy zones round about Jupiter.

These different zones of moisture, whose limits coincide in several places with the isothermal lines, are developed across the continent with sufficient regularity to enable M. Chavanne to map them out. Africa is more sharply distributed in distinct regions by its deserts than it could have been by broad arms of the sea,

and the distribution of its inhabitants has also been determined almost exclusively by the climatic conditions, depending everywhere on the abundance of rain and vegetation.

FLORA AND FAUNA.

In its flora and fauna, as well as its climate and geology, North Africa belongs to the zone of transition between Europe and Asia. The apparent unity imparted to the continent by its compact form is not realised when we examine in detail the phenomena of life. Cyrenaica and the whole Mauritanian seaboard on the slope of the Atlas range belong to the vegetable domain of the Mediterranean, in which are also comprised Spain, Provence, Italy, the Balkan peninsula, the shores of Asia Minor, and Syria. The zone of the Sahara, which stretches under the Tropic of Cancer across the continent, is continued in Arabia to the Persian Gulf, and even through some of their rarer species embraces the Baluchistan coast, Thar, the Rann, and the Kathyawar peninsula in India. Lastly, the floras of Yemen and Hadramaut resemble those of Sudan, the narrow Red Sea having been easily traversed by African species.

For the whole continent, the characteristic vegetable zone is that of Sudan and the equatorial regions, which stretches from sea to sea, and from desert to desert, between the Atlantic and Indian Oceans, between the Sahara and Kalahari. Speaking broadly, it is much poorer in distinct species than the other tropical regions, such as India and the Sunda Islands, and even than some sub-tropical lands, such as Asia Minor. Nevertheless certain central districts in Africa possess a remarkable variety of plants, as for instance, the territory watered by the Diûr, not far from the dividing line between the Nile and Congo basins. Here Schweinfurth collected in five months nearly seven hundred flowering species, which it would be impossible to do in the richest European lands.

Most of the African tropical domain is exposed to the periodical rains, with long intervening periods of dryness. Hence arborescent vegetation nowhere displays greater exuberance and vigour than on the plains between the Congo and Nile, where the streams often disappear amid dense masses of foliage, and in the neighbourhood of the Bight of Benin, which enjoys far more humidity than the interior. A large extent of the zone of the Sudan is occupied by prairies, although some tracts are so overgrown with graminaceous and other herbs that animals refuse to penetrate into them. In the Nile marsh lands, certain andropogonous varieties have non-woody stalks over twenty feet high, affording to the giraffe cover from the hunter. The various graminaceous plants of Central Africa are not intermingled like those of the European fields, and tracts several hundred square miles in extent are sometimes occupied by a single species.

Thorny plants are relatively very abundant in the forests of the Sudan, and after clearances the trees appear not to spring up so rapidly in this zone as in South America. Varieties of the palm family are ten times more numerous in Asia and America than in Africa, which has consequently a wider range for its prevailing species. The equatorial regions of other continents have scarcely any cocoa-nut

forests except on the Malabar coast, in Ceylon, and around the Caribbean seaboard, whereas in North Africa the dâm palm (*hyphæne thebaica*), and the deleb (*borassus flabelliformis*), as well as the date (*phoenix dactylifera*) cover extensive tracts in the oases of the northern Sahara. Compared with the number of its species, the Nigretian flora possesses many trees with an abnormal development of stem, leaf, and fruits. The baobab is noted for the enormous size of its trunk, while the *kigelia* and some other bignoniaceæ have fruits two feet long, and the *ensete*, a variety of the musaceæ, displays the largest foliage in the entire vegetable kingdom.

The Kalahari flora, south of the tropical domain, resembles that of the Sahara, except that it forms no oases, nor are the few watered tracts anywhere shaded by palms. This flora is distinguished by its thorny acacias and mimosas, and, like that of Northern Nigretia, it abounds in graminaceous species. On its northern margin some almost rainless districts grow the *welwitschia*, a remarkable plant, so flush with the ground as often to escape the notice of travellers. Burrowing downwards in the form of a reversed cone, it displays above ground nothing but a rough surface over a yard long, throwing off right and left two cotyledons of a leathery appearance, and occasionally exceeding 16 feet in length after a growth of one hundred years.

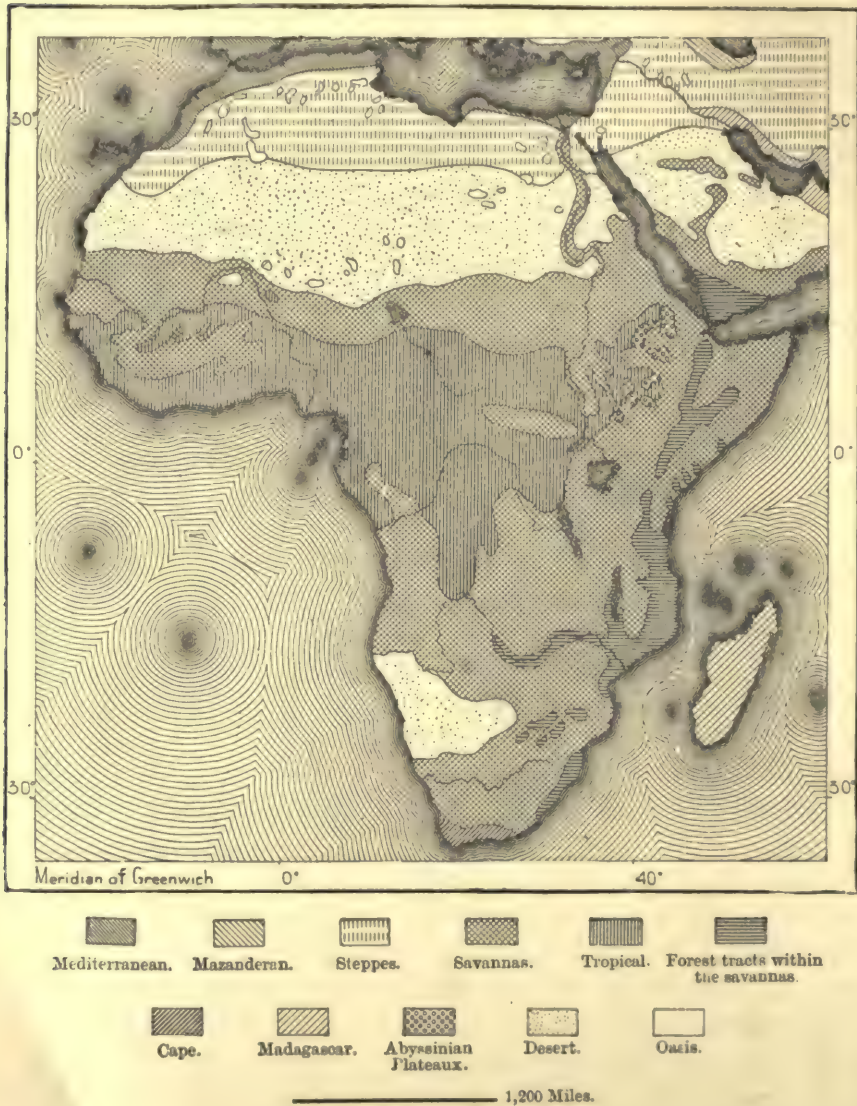
On the east coast of Africa, the transition between the vegetable zones is more gradual than on the opposite side, where the tropical domain is abruptly limited by the Kalahari desert. Along the Indian Ocean the change takes place imperceptibly from north to south through the Limpopo basin and Natal. On this seaboard, which is skirted by the warm Mozambique stream, the southern limit of the palm lies 16 degrees lower down than on the Atlantic coast. But on the whole the vegetation south of the Orange River is clearly distinguished from that of the rest of the continent. Although the rainfall is limited and the geological formations far from varied, the Cape flora, consisting chiefly of grasses, shrubs, and bushes, is altogether unique for the multitude of its intermingled species. In this respect it is unrivalled even by the richest European countries. Nowhere else do the mountain slopes present more vegetable forms disposed in belts sharply separated from each other by the several zones of altitude. It may be asked whether this Cape flora is not a survival from far more extensive lands engulfed in the sea, most of whose vegetation has found a refuge in the relatively limited tract bounded northwards by the basin of the Orange River. In the same way the island of Madagascar appears to have preserved a great part of the flora of the vanished "Lemurian" continent. It still possesses over forty vegetable families peculiar to itself.

The appearance of Europeans and Semites has been accompanied by the introduction of many new species, which in several districts have displaced and even exterminated the indigenous forms. Elsewhere the range of certain plants appears to have been modified even without the intervention of man. Thus the papyrus, which three thousand years ago was characteristic of the Egyptian Nile, is now, according to Schweinfurth, found only on the Upper Nile near the equator.

The pink lotus also (*nelumbium speciosum*), whose flower symbolised the fertilising stream, the sun, and the sun-god, no longer flourishes on the Egyptian waters. On the mummies of the tombs in Upper Egypt are found floral wreaths containing

Fig. 6.—VEGETABLE ZONES OF AFRICA.

Scale 1 : 75,000,000.



numerous species, such as the *centaurea depressa*, which have since disappeared from the local flora, or at least no longer grow spontaneously.

The zones of the African fauna are less clearly defined than those of the vegetable kingdom. Migrating more easily than the plants, the animals have crossed many frontiers within which the plants have been confined by the climatic conditions. Hence the same animal types prevail throughout Nigretia and the

region north of Cape Colony. Numerous species of mammals and birds are met from the southern extremity of the continent to the banks of the Senegal; nor are the plateaux and highlands anywhere lofty enough to prevent the migrations of animals, which in Africa are kept apart rather by the broad desert wastes than by mountain barriers.

The Mascarenhas, and especially Madagascar, are centres of independent life, the latter containing over one hundred animal species not found elsewhere. But the immigrations of Arabs and Europeans have added several species to the African fauna, in exchange for those they have contributed to extirpate. The camel, without which it seems impossible for caravans to cross the Sahara in its present arid state, is nevertheless a comparatively recent arrival, its image occurring nowhere either on the old Egyptian monuments or on the "inscribed stones" of the ancient Berbers. Hence it is evident that the Sahara was not always a desert; and valuable inscriptions, confirming the text of Herodotus, prove that the ox and the zebu were the first pack animals of the Garamantes on the route between Fezzan and Sudan. Now man has been followed by his ordinary companions, such as the horse and dog, at least wherever they have been able to adapt themselves to the climate. When the American Chaillé-Long appeared on horseback at the court of the King of Uganda, north of the Victoria Nyanza, the natives fancied, like the Mexicans at the first appearance of the Spanish cavalry, that horse and man formed one animal, and when the stranger dismounted they ran off terror-stricken at the sight of this centaur dividing itself into two distinct beings.

The greatest obstacle to the development of Africa is caused by the tsetse (*glossina morsitans*), a simple fly, whose bite is fatal to horses, camels, oxen, and dogs, although harmless to man, the calf, goat, and wild beasts. This destructive insect, which is supposed, rightly or wrongly, to infuse anthrax virus into its victims, is very common in certain districts of South and Central Africa, but does not extend farther north than the Bahr-el-Ghazal and Senaar, and is unknown in the north-west. The *donderobo*, another two-winged pest observed to the south of the Kilima Njaro, spares cattle, but attacks the ass, goat, and sheep.

Africa is the home of the largest living quadrupeds, such as the elephant, various species of the rhinoceros, the hippopotamus, giraffe, and other herbiferous animals. At the same time the African elephant is smaller, less vigorous, and more difficult to tame than its Indian congener, from which it differs in its convex frontal bone, large ears, and some other physical characteristics. The attempts made by Gordon to domesticate this animal and employ it in warfare were not successful, and in this respect Europeans have still to discover the secrets known not only to the Hindus, but even to the ancients, and, according to Duveyrier, to the tribes south of Mauritania, and to the Wakorays of the western Sahara.

The lion of the Atlas highlands is fiercer than the Babylonian species; the gorilla is the strongest and most formidable of the ape family; of all hoofed animals the zebra is the most indomitable; neither the American caiman nor the Indian gavial approach the dimensions of the African crocodile, and of all

running birds the African ostrich is the most powerful. This continent excels not only in the number and size of its animal species, but also in the multitude of individuals. Thus on the central plateaux travellers have observed vast plains covered by countless herds of ruminants, and Livingstone tells us that he had to force his way through the dense troops of antelopes. But since then wide gaps have already been made amongst these teeming multitudes by destructive hunting expeditions in the Nile basin and in the southern plains. It is calculated that the 15,600 cwts. of ivory yearly imported into Europe cost the lives of 50,000 elephants. Whole species are threatening to disappear, as the small Mauritanian elephant and certain animal forms in the Mascarenhas Islands have already vanished. The range of the rhinoceros formerly comprised south-west Morocco, where it has not been seen in historic times.

INHABITANTS.

During the first half of the present century European geographers, still unacquainted with the interior, were naturally inclined to exaggerate the extent of the desert regions, and readily regarded as solitudes all spaces left blank on the maps. The continent was supposed to contain some fifty or sixty, or at the utmost a hundred, million inhabitants. Since that time more accurate statistics have been taken in some of the European colonies or possessions on the coast; rough estimates have also approximately determined the population of some districts near the maritime ports, and travellers, yearly increasing in numbers, have brought from the interior at least sufficient data to enable us to classify the inland regions according to the greater or less density of their populations. In some of these districts the people are as closely packed as in Belgium, while elsewhere village succeeds village for several leagues together. The basins of Lake Tsad and the Joliba (Niger), as well as most of Nigritia south of the Sahara, are thickly peopled, as are also the region of the great lakes, the Nile delta, the White Nile in the Shilluk territory, and the lands watered by the Congo and its chief affluents. The population of the whole continent cannot be estimated at less than two hundred millions, or seven times more than the calculations of Pinkerton and Volney nearly a century ago. More recently Balbi fixed the number at sixty millions, which was long accepted as the most probable. The hypothetical element in all these rough estimates will doubtless be gradually diminished by the systematic work of modern explorers.*

To Africa the expression "Dark Continent" is frequently applied, as if all its inhabitants were Negroes properly so called, analogous in type to the maritime populations in the west equatorial region. The term Beled-es-Sudan, or "Black Land," would thus be extended to the whole continent. But the true Negroes, although perhaps forming a majority of the inhabitants, occupy less than half of the land. The regions to the north, east, and south belong to tribes and peoples of diverse physical appearance, and grouped in distinct races or sub-races. Some

* Approximate estimate of the population of Africa by Behm and Wagner in 1882, 205,825,000.



[illegible]

ethnologists have supposed that all the "Children of Ham," from the Berbers to the Hottentots, are descended from one original stock, and that their diverging types are due to gradual adaptation to different environments. But such a hypothesis is unsupported by any proof, and the observer is struck especially by the ethnical contrasts, whether fundamental or derived, which are presented by the various African populations, as he advances from north to south. Even within the strictly Negro division the anatomy, muscular system, physiognomy, colour, and speech offer as great a diversity of forms as is found amongst the white peoples of Europe or the yellow Asiatics. At the same time the classifications hitherto proposed by anthropologists, and based on physical resemblances or linguistic affinities, are of a purely conventional or provisional character. Numerous communities, of which little is known beyond their name, are grouped now in one, now in another division. We seem at times to be lost in the maze of names of tribes and races collected by travellers in the various regions of Africa, and the chaos is often intensified by the reckless use of these names, the same term being applied in one place to two distinct peoples, while in another the same group is indicated on the maps by several different appellations.

The Mediterranean seaboard differs from the rest of the continent as much in its inhabitants as it does in its geological history, its physical features, its animal and vegetable species. The bulk of the Mauritanian population consists of the so-called Berbers (Imazighen, Imohagh), who approach the European type more closely than the other African races. Amongst them are met several tribes in which blue eyes and fair or light chestnut hair are so common that they have often been wrongly regarded as of European descent. These Berber peoples seem to be allied to the ancient Egyptians. The whole of North Africa and Southern Europe may have even been peopled from one ethnical source in prehistoric times, the populations, like the animal and vegetable species, thus radiating from a common centre. The oases and upland valleys in the Sahara have also been occupied by the Berbers, some of whose tribes, designated by the name of "Moors," dwell even south of the desert along the right bank of the Senegal.

Some of the Berber communities, such as the Imohaghs or Tuaregs of Ahaggar, and the Imazighen or Kabyles, that is, "Tribes," and especially those of Morocco, appear to be of pure stock. But in the plains, and still more in the towns, endless crossings have modified the type in a thousand ways, and given rise to half-caste populations bearing a great variety of names. As in Europe "Moorish" blood still flows in the veins of Andalusians, Murcians, Valentians, and Algarves, so in Africa Phœnicians, Romans, Vandals, Spaniards, Provençals, Italians, Greeks, and Frenchmen have left some traces of their presence, either as slaves or conquerors.

On the other hand, the dark aborigines of the Sahara and the Negroes imported from the south into every part of Barbary have become diversely intermingled with the Berber tribes, while fresh elements have been introduced from the east by the Arabs. Under this term "Arab" were moreover comprised Syrians and Easterns of all kinds, and it has even been extended to a large part of

the Mauritanian population, Arabs only in speech, traditions of conquest, religion and some doubtful genealogies.

In the Nile basin great mixture has also taken place, but in this intermingling the European and Turkish elements are but slightly represented, whereas the Arabs and other Semites have had a preponderating influence in the formation of many communities in North-east Africa. Historians have often attempted to draw an absolute line between the Egyptians and the Nilotic peoples above the cataracts. They considered that the inhabitants of the three Egyptian provinces should be grouped either with the Semites or Aryans, or else regarded as a distinct race. The Retu (Rotu), that is, the ancient inhabitants of the Lower Nile, have thus been affiliated to a so-called "Proto-Semite" stock, whence the Arabs also were supposed to be descended. Although arguments based on the element of speech have but a relative value, it is generally admitted that the "Hamitic" linguistic family, comprising Old Egyptian, Galla, and Berber, presents in its structure a remote affinity to the Semitic idioms. But Old Egyptian and its modern representative, the Coptic, is much more clearly related to the Berber dialects. The Retu type itself, surviving in that of the modern Fellahin in spite of countless crossings and modifications, is by no means Semitic. Nor is it akin to that of the Negroes of the interior. Doubtless many Egyptians, as has been remarked by Champollion the younger, resemble the Barabra of Nubia, who themselves differ little from the Beja. Travellers ascending the Nile assure us that the type of the northern Fellahin merges by insensible transitions in that of the southern populations. But this phenomenon is the inevitable result of racial interminglings. The original type has been modified in a thousand ways by crossings, migrations, conquests, the introduction of slaves, diet, and other social conditions. Thus have been developed numerous mixed races, and the most varied contrasts in figure, colour, habits, speech and political institutions between neighbouring populations.

In the region of the great lakes and of the western affluents of the Upper Nile, the Negro nations, properly so-called, are represented by the Fung, the Shilluks, the Bari, Denka, and other dark communities. But the majority of these Negroes are far from being characterised by the black and shining skin, the pouting lips, the projecting jaws, flat features, broad nose, and woolly hair which are usually supposed to be characteristic of all Africans. Even the Monbuttu, a nation dwelling to the south of the Niam-niam, between the Congo and Upper Nile basins, are distinguished by an almost light complexion, a tolerably full beard, a straight or aquiline nose, and amongst them are frequently met persons with hair of an ashy blonde colour. Schweinfurth estimates these "fair negroes" at over a twentieth of the whole Monbuttu nation. Possibly their carnivorous diet, comprising even human flesh, may contribute to some extent to give a relatively light complexion to these aborigines. At least the observations of M. Antoine d'Abbadie on the Ethiopian tribes, observations confirmed by several other travellers, tend to show that flesh-eating peoples, even those of hot lowlands, have a much fairer complexion than those living on a vegetarian diet, even when the latter dwell at a higher elevation on lofty plateaux and mountain slopes. The Negroes



GROUP OF NUBIAN WOMEN.



who approach nearest to the traditional type as popularised on the stage are those of the Atlantic seaboard. Nowhere else has the slave-trade caused greater havoc than amongst these tribes, and the hatred of the white master for his slave has tended to exaggerate the repulsive type attributed to the slave races in general.

According to physiologists, the blood of the Negro is thicker and less red than that of the whites. It coagulates more rapidly and flows more sluggishly. The Negro, like the yellow Asiatic Mongol, is of a less sensitive temperament than the European. He suffers less under surgical operations, and runs less danger from their consequences; his nervous life is less intense, his pulsation less active, than that of Europeans. Several of the maladies common in Europe are unknown, or at least very rare, in Africa. Cancer, croup, dental caries, typhoid and marsh fevers, seldom attack the Negro, who on the other hand suffers more from bilious and cutaneous disorders. Tetanus also is much dreaded by them, and the least change of climate exposes them to pulmonary affections. Where the whites and blacks live side by side on the same plantations, the former fall victims to yellow fever, the latter to cholera. Home-sickness is also one of the most fatal affections of the African race.

The portion of Africa lying in the southern hemisphere is mainly occupied by the Bantus, whose various communities present a somewhat analogous type, and speak languages derived from a common stock, as had already been observed by Lichtenstein at the beginning of the century. The Kafirs of Natal and Cape Colony are amongst the finest of this noble Bantu race, which rivals the Barabra of the Nile in its proud carriage and graceful attitudes. But in direct contact with these superb Africans are found other aborigines presenting a totally different and far less noble type. These are the Koikoin, or Hottentots, characterised by a yellowish complexion, low stature, and slightly developed muscular system. These communities, as distinct from the Bantus as are the Chinese from the Aryans, may perhaps represent a vanquished race driven by the invaders gradually to the southernmost limits of the continent. But such a hypothesis seems much more justified in respect of certain "pigmy peoples" scattered over a great part of Africa. Such are the San, or Bosjesmen, that is "Bushmen," of South Africa, the Dokos of Kaffa, the Akka or Tikki-tikki of the Welle River, the Obongo of the Ogowé basin. In connection with these dwarfish populations, and especially the Bushmen, anthropologists have observed that if Africa is the continent of the great anthropoid apes, such as the gorilla and chimpanzee, it is also the home of the most ape-like human races. In this region of the globe, they tell us, the two orders of primates approach nearest to each other. One is tempted to regard these pignies as a remnant of the aboriginal element deprived of their lands by stronger intruding races.

The inhabitants of Madagascar are only partly connected with those of the neighbouring continent, for a portion of the population is certainly of Malay origin. Like the local plants and animals, it bears witness to the geographical independence of the island. But in the adjacent Comoro group the prevailing speech is African.

National prejudice, for which historians fail to make due allowance, has given rise to the widespread impression that the Africans have, so to say, taken no part in the general work of civilisation. The first example which presents itself to the mind is that of the king of Dahomey, celebrating the "great custom" by a general massacre and the flooding of a lake with human blood; or else we conjure up the image of those armed Monbuttu hordes which rush to battle grinding their teeth and shouting "Meat! Meat!" But these frightful pictures are not an epitome of the history of Africa. On the contrary, we are irresistibly attracted by the study of our own social evolution to the Nile basin in North-East Africa. Looking back through the long perspective of the past, far beyond the heroic times of Greece, where was cradled our distinctly European culture, we ascend from century to century to the remote ages when the Pyramids were raised, when the first ploughshare turned up the rich soil of the Nile delta. In Egypt are found the very oldest documents of authentic history. So well established was its claim to the foremost place in the development of civilisation, that the Greeks themselves regarded the Nilotic region as the common cradle of mankind. Whatever be the constituent ethnical elements of the nation to which we trace the germs of our intellectual life, it is certain that their civilisation was of African origin. It had its earliest seat in the narrow and fertile valley of the Nile, between the arid rock and the still more arid sands of the wilderness. Through this mysterious stream, flowing from the depths of the continent, were first established mutual intercourse and civilising influences amongst the various regions of the old world. The north African lands lying farther west were almost entirely excluded from any share in this movement, at least before the introduction of the camel into the Dark Continent, for till then they remained separated by the vast intervening desert from the thickly peopled regions of Sudan.

From the remotest antiquity the Africans, even beyond Egypt, took part in the triumphs of mankind over nature. They were either stockbreeders or tillers of the land, and to them we are indebted for many valuable plants and domestic animals. From the African continent comes the variety of sorgho which, under the name of durra, is cultivated from the banks of the Nile to the shores of the southern ocean, and which is rivalled only by wheat and rice in its economic importance to mankind. From Africa we have also received the date, for the Berbers and Sudanese were probably the first to study the habit of this palm, which grew spontaneously in their forests. According to Schweinfurth, the wild stock of the Ethiopian banana, known to botanists by the name of *musa ensete*, gave rise to the hundred varieties of the cultivated banana, whose fruit serves as a staple of food in many American lands. To these three important vegetable species must also be added the kaffa shrub, or coffee plant, so highly prized by a third of mankind for the stimulating properties and delicious aroma of its berry.

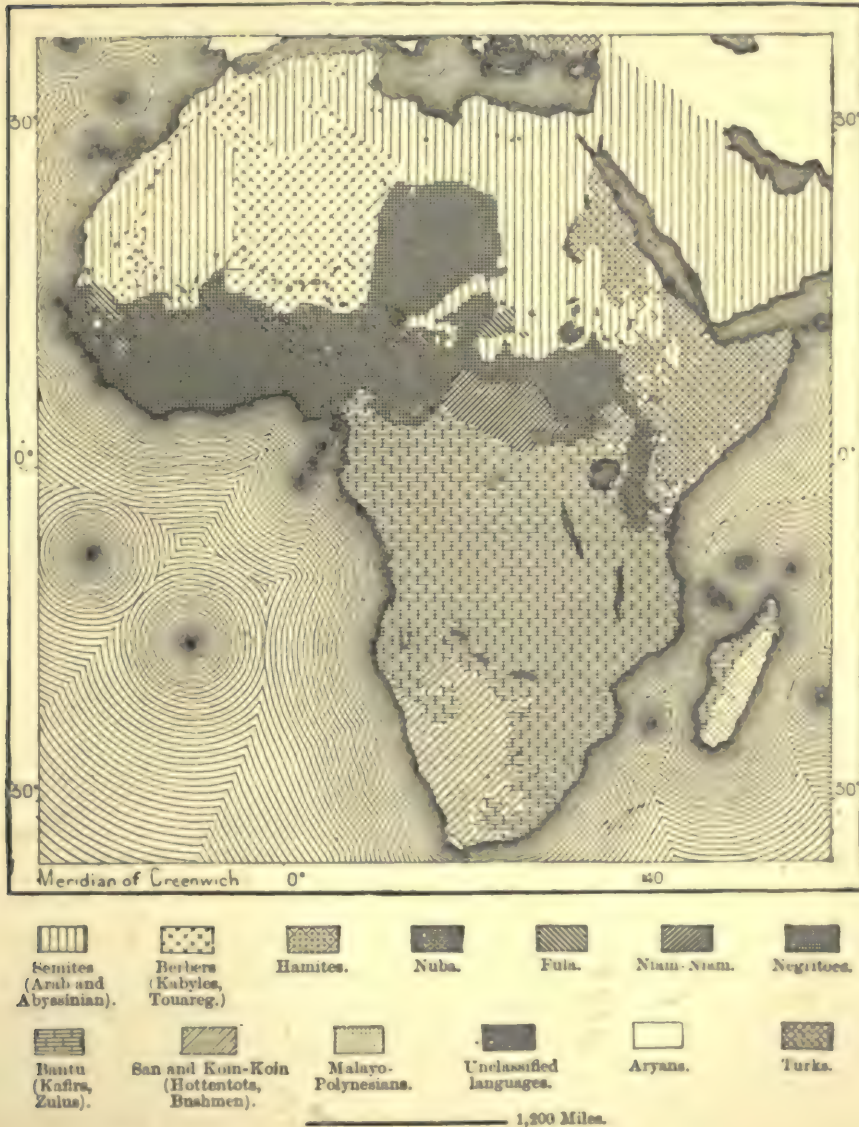
The civilised world is also indebted to the natives of Africa for several domestic animals. Certain varieties of the dog, the cat, the pig of Senaar, and the ferret, have been tamed by them; the ass also is certainly of African origin, and to the same source should perhaps be traced the goat, the sheep, and the ox. In recent

times the guinea-fowl was, so to say, rediscovered by the Portuguese in this continent, whence it had been originally obtained by the Greeks and Romans, but had again disappeared during mediæval times.

Even in the sphere of industries, Africa has contributed a certain share to the common inheritance of mankind. The monuments of Egypt, her highways, canals,

Fig. 7.—LANGUAGES OF AFRICA.

Scale 1 : 75,000,000.



embankments, her costly fabrics, gems, and furniture, her carved woods and wrought metals—in a word, the thousand objects found in her burial-grounds—cannot all have been the work of the Retu alone. Amongst the products of the old Egyptian industry are frequently recognised certain forms also recurring in

Nubia, in Abyssinia, and even in Sudan. The smelting and working of iron, most useful of all metallurgic discoveries, has been attributed to the Negroes as well as to the Chalybes of Asia Minor; and the Bongos of the White Nile, as well as some other African tribes, have constructed furnaces of a very ingenious type. Their smelters and forgers are, for the most part, satisfied with rude and primitive implements, in the use of which they, however, display marvellous skill. The Fans of the Ogowé basin produce excellent iron, whose quality is scarcely equalled by Europeans themselves. In most of the native tribes the smiths constitute a special caste, much respected and even dreaded for their reputed knowledge of the magic arts. In Abyssinia and Senaar they are accused of changing themselves at night into hyænas and other wild beasts, which prowl about the villages and disinter the bodies of the dead.

In agriculture and industry the Africans so far co-operated in the development of human culture. But their direct influence in the trade of the world was felt only through Egypt and Mauritania along the Mediterranean seaboard. Commercial intercourse was doubtless carried on throughout the whole continent, but very slowly, and through a thousand intermediary tribes. The produce of Central Africa reached Europe long after all trace of its source had disappeared. In the same way the riverain populations along the banks of the Niger received their Manchester cottons and hardware from Birmingham without suspecting that their river flowed into the sea, or that there are other great divisions of the globe beyond the Dark Continent. Nevertheless, there can be no doubt that for thousands of years an active trade has been carried on with the interior. Down to a recent epoch caravans were regarded as sacred, passing fearlessly through contending armies and across disturbed regions. The spirit of traffic prevails amongst numerous tribes in Mauritania, the Upper Nile, and Sudan, as amongst the Jews and Armenians elsewhere, and their dealers display all the shrewdness, tenacity, and inexhaustible obsequiousness everywhere characteristic of the mercantile classes.

From time immemorial the cowries of the Maldivé Islands (*cypræa moneta*), gradually replacing other small objects, such as grains of durra and various seeds, have penetrated as a symbol of exchange as far as West Africa. Through the Calcutta, London, or Zanzibar routes, they are still imported to the Bight of Benin, whence they are forwarded to the markets of Lake Tsad.* But the natives now use them chiefly as ornaments. European travellers find that the Turkish piastres and Maria Theresa crowns have already preceded them in most of the unknown regions of the interior. The Bongo tribe was even acquainted with the art of minting, and current coins are also the bits of iron four inches long which are in common use amongst the Ogowé Fans.

But in maritime commerce the Africans scarcely take any part. With the exception of Alexandria, which, thanks to its position on the route between Europe and India is an essentially international point, Carthage was the only continental city that rose to power by its trade. But Carthage was itself a Phœnician colony, founded on a headland projecting into the Mediterranean in the direction of

* John E. Hertz, "Proceedings of the Hamburg Geographical Society," 1880-81.



BISHARI GUM-DEALERS AT KOROSKO.



Europe. Seafaring communities are rare along the African coasts. The list is almost exhausted by the mention of the Somali at the eastern "horn," and of the Kra or Kroomen on the Atlantic side. But the former scarcely get beyond the Gulf of Aden, passing with the shifting trade winds from shore to shore, while the latter seldom venture far from the coast lagoons and estuaries.

RELIGION.

Since the fall of Carthage and the decadence of Egyptian culture, the most important event in African history has been the Moslem invasion. In the Dark Continent the zealous missionaries of Islam have reaped the richest harvests. The simplicity of the Mussulman creed, which limits itself to proclaiming the unity, omnipotence, and goodness of God; the clearness of its precepts, recommending above all prayer, and cleanliness as the outward symbol of purity; the zeal of its preachers, the prestige of its victories over the "infidel," all combined to seduce the Egyptians, the Berbers, and Negroes. From age to age the Mohammedan domain has grown in extent, until it now comprises nearly half of the continent, from the Isthmus of Suez to the sources of the Niger, and even to the Gulf of Guinea. During the first period of its triumphs, Islam, heir to the sciences received from the Byzantine world, infused new life, as it were, into Egypt and Mauritania, endowed them with a fresh civilization, and through the caravan trade with Morocco, already the emporium of Mussulman Spain, raised Timbuctu, on the Niger, into a great centre of commercial and intellectual movement.

In Nigretia the propagation of Islam also coincides with important political and social changes. Large states were founded in regions hitherto a prey to a hundred mutually hostile and savage tribes. Manners were thus softened, and a sentiment of solidarity sprang up between communities formerly engaged in everlasting warfare. Mohammedanism thus enjoys more material cohesion in Africa than in Europe and Asia, where the faithful, scattered amid populations worshipping at other altars, are often separated from each other by extensive wastes and arms of the sea. In the Dark Continent they occupy a compact domain as large as all Europe, stretching uninterruptedly from the Red Sea to the Atlantic, and here their common belief tends everywhere to diffuse the social ideas, the habits, usages, and speech of the dominant Arab race.

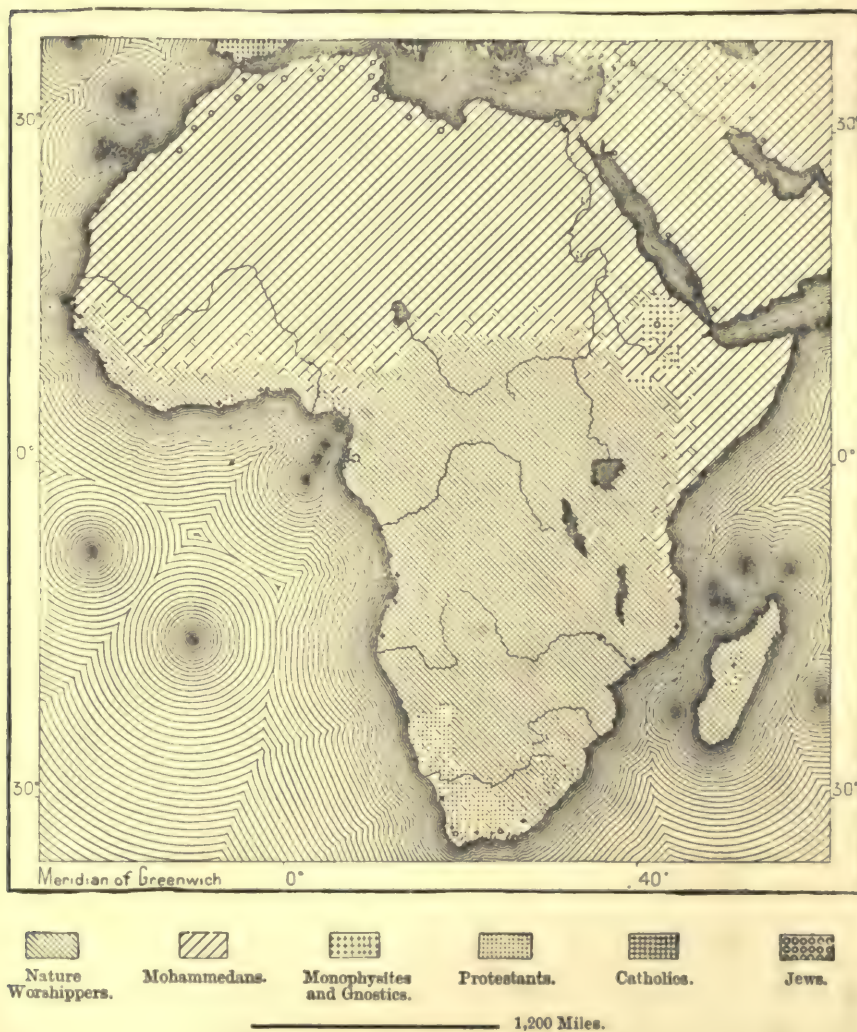
In recent times Christianity has attempted to dispute the field with its Mohammedan rival. Protestant missionaries have even obtained some little success, especially in South Africa. But compared with the apostles of Islam they stand at a great disadvantage, for they are unable, except in a figurative sense, to announce themselves as the brethren of their black proselytes. The "messenger of the good tidings" cannot give his daughter in marriage to his Christian Negro convert. Colour keeps them apart, and both remain men of different race and caste.

Having become the inheritance of the faithful by the triumph of Islam, Africa has witnessed the birth of prophets powerful enough to declare the "holy war."

During the invasion of Egypt by the French under Buonaparte at the close of the last century, a *mahdi*—that is, a “spiritual guide” foretold by old prophecies—summoned his followers to exterminate the stranger. Recently other mahdis have stirred up the tribes in the West against the French of Senegambia, in the East against the Turks and English in Egypt. In the North, also, fanatics are prepar-

Fig. 8.—RELIGIONS OF AFRICA.

Scale 1 : 75,000,000.



ing emissaries in Algeria, Tripoli, and Senusiya, and sending them from mosque to mosque in order to excite the congregations against the infidel. In Mecca the most zealous pilgrims, that is, those subject to the most frequent fits of religious frenzy, are the Takrur or Takrârîr, a term usually applied collectively to the West African Negroes, but in a more special sense to those of Wadai and Bornu, and to the inhabitants of Metammeh, in the north-west of Abyssinia. Notwithstanding

the difficulties of the journey, thousands of these Tukurrs undertake the pilgrimage every year.

In West Africa the propagators of Islam, although using the language of the Prophet, are not Arabs, but Negroes of various tribes. As traders or artisans, they visit the populations along the banks of the Gambia, and penetrate even as far as Ashanti and Dahomey, on the Gold Coast and Bight of Benin. In East Africa the propaganda is also very active on the shores of the Indian Ocean, although here the Arab or Swahili dealers take no interest in the conversion of their wretched victims. On the contrary, they prefer to keep them pagan, in order to retain the right of persecuting and plundering them. Once converted, even by the mere initial rite of circumcision, the natives, of whatever race and colour, acquire the privilege of common fellowship with the rest of the faithful. Nor is there lack of honest Mohammedans, who zealously labour in the spirit of the precepts of the Koran for the emancipation of their slaves. In the province of *Bahr-el-Ghazal* Felkin met the son of a slave-dealer, who finding himself by his father's death the owner of several hundred Negroes, immediately liberated all of them.

SLAVERY.

But like their Christian rivals, the Arab traders dealt till recently for the most part in human flesh rather than in elephants' tusks, cotton, ground-nuts, or palm oil. Unfortunately for themselves, the Negroes are the most docile and devoted of servants. Anthropologists have remarked on their essentially feminine type as compared with that of the whites. They are generally noted for their soft voice, scant beard, delicate articulation, pink nails, velvety skin, and rounded muscles.* However physically strong, in manners and demeanour they also approach the general type of woman. They are timid and inquisitive, jealous and coquettish, great gossips and scandal-mongers, quick to love, as quick to fall out and make up their quarrels again. Like so many women, they also delight in abject submission, even sacrificing themselves for those who despise and oppress them.

Hence from the remotest times the blacks were most highly esteemed as slaves, and of the tributes or presents forwarded to the Asiatic and European sovereigns, those were most acceptable which were accompanied by African captives. In Africa itself almost every community has its slaves, and amongst many tribes one half of the population is enslaved to the other. Prisoners of war, considered as so much merchandise, are bartered or sold to the highest bidder, destined either to till the lands of their owner or to increase the number of retainers attached to some powerful chief; or else, in some districts, to be immolated in honour of the gods or ancestors of some obscure potentate; or lastly, as amongst the *Monbuttu*, to be roasted and served up at the great feasts. Nevertheless, the position of the slave is not generally one of great hardship. He often himself accepts this lot to escape from starvation in times of distress, and if badly treated by his owner he enjoys the prescriptive right of transferring his services elsewhere. By renouncing his

* Winwood Reade; G. d'Eichthal.

personal freedom he enters a new family, and the offspring of the free woman whom he marries are free like their mother.

It must be confessed that the condition of the African slave has been aggravated mainly through the influence of European civilisation. Even long before the discovery of the Coast of Guinea by the white navigators, and before the foundation of European colonies in the New World, slave markets were held in Seville and Lisbon. But when Portugal had taken possession of the seaboard, and the Spaniards, Portuguese, English, French, and Dutch required robust hands to replace the exterminated natives on their remote western plantations, then a large part of Africa was transformed to a vast hunting-ground for human quarry, and the name of "white" became synonymous with "cannibal," as it still is in the Galla language. All round the coast stations sprang up as outports for this new merchandise. The Portuguese forwarded to Brazil the Negroes captured in Angola; Jamaica, Barbadoes, and Virginia received their supplies from the Cape Coast; Louisiana and the French Antilles from Senegal and the Slave Coast; New Amsterdam from Elmina. Every American settlement thus had its corresponding emporium in Guinea. The horrors of the "middle passage" exceeded all description. To save space the living freight was packed in the smallest compass on board ship, where large numbers were swept away by typhus, heat, thirst, and suicide. It would be impossible even roughly to estimate the multitude of human beings sacrificed by the slave-trade, through the wars it fomented around the African seaboard, the epidemics it propagated, the revolts and massacres of which it was the consequence.

Although the Africans removed to the New World must be reckoned by many millions, the coloured population, consisting almost exclusively of men, increased very slowly on the plantations. In the present century, however, the equilibrium of the sexes has at least been established amongst the exiled race. At present the number of pure or half-caste Negroes in America exceeds twenty-five millions, and amongst them there are still about one million five hundred thousand unemancipated. But since the sanguinary civil war waged in the United States for the liberation of the blacks, this ancient form of servitude is finally condemned, and the number of slaves is daily diminishing in its last strongholds, Cuba and Brazil.

In Africa itself, the institution has received a fatal blow by the closing of the maritime outports, and whatever may at times be said to the contrary, very few of the Arab and other craft engaged in the traffic succeed in forcing the blockade along the shores of the Indian Ocean.* Many however still cross the Red Sea, in defiance of the English at Aden, of the French at Obock, and of the Italians at Assab, while tens of thousands continue to fall victims to the Arab and other kidnappers in the interior of the continent. During the heyday of the slave-traders the traffic cost the lives of at least half a million Negroes every year. Compared with that already remote epoch, the present must be regarded as an age

* Slavers captured and condemned on the east coast of Africa, 1876-7, 27 with 433 slaves; 1877-8, 15 with 60 slaves.

of progress. The outposts on the coast are no longer crowded with captives, and, as in the New World, the wars stirred up by the dealers in human flesh involve the ultimate ruin of their infamous traffic.

EXPLORATION.

Henceforth supported by other produce than that of slaves, the commerce of Africa already finds the interior more accessible to its agents, and the continent thus becomes daily more closely connected with the rest of the world. Large numbers of explorers starting from various points round the coast are continually invading new or little-known regions, and amongst them are many brave volunteers ever ready to sacrifice their lives in the sole interest of science and humanity. It is one of the glories of our age to have produced so many heroes, some who have achieved fame, others whose very names are already forgotten, but all alike devoting themselves merely to fill up the blank spaces on the map of the Dark Continent. A "necrological" Map of Africa has been prepared by M. Henri Duveyrier, showing the names of the chief European explorers who, between the years 1800 and 1874, have either been murdered by fanatical Mohammedans or fallen victims to the deadly climate and the hardships undergone in their efforts to advance geographical knowledge. Since then the list has been considerably augmented, and the names of Flatters and his associates—of Schuwer, Sacconi, Keith Johnston and many others—have been enrolled amongst the martyrs of science.

In the history of African discovery, as in that of all other human conquests, progress has not always been continuous. Until recently the work of exploration has rather been carried on interruptedly, and at times even discontinued for long intervals. Between the first voyage of circumnavigation, mentioned by Herodotus as having been accomplished under Pharaoh Necho, and that of Vasco de Gama, there was an interval of twenty-one centuries, during which numerous discoveries already made had been forgotten. The geographers of the fifteenth century were acquainted with the results of the older explorations only through Ptolemy's inaccurate statements, which were made still more confusing by the carelessness of copyists and the imagination of commentators. The coasts already known to the Phœnicians had to be rediscovered, for Hanno's voyage to the south of the Senegal River, accomplished nineteen hundred years before the Portuguese, had long ceased to be remembered. Even after Gama's "periplus," and the occupation of a large portion of the coast by the Portuguese, our knowledge of the regions already visited was more than once obscured, thanks mainly to the jealousy of rival nations anxious to keep for themselves the secret of their expeditions.

At present learned writers are patriotically engaged in vindicating for their respective countries the honour of having been the first to explore many since-forgotten regions. It seems certain that long before the Portuguese, Italian navigators had surveyed most of the north-west seaboard, and even the islands and archipelagoes lying off the coast. A sketch by the Venetian Marco Pizzigani,

dated 1367, and preserved in the library of Parma, lays down the African coast as far as Cape Bojador, in a way generally in conformity with the results of the most careful modern surveys. The people of Dieppe on their part claim for their ancestors the glory of having founded a "Little Dieppe" on the Guinea Coast in 1364, and of having in 1402 colonised the Canaries under the orders of Jean de Béthencourt.* The Portuguese also, whose navigators claimed to be the first to

Fig. 9.—CHIEF ROUTES OF EXPLORERS IN THE INTERIOR OF AFRICA (1883).

Scale 1 : 75,000,000.



The courses of rivers and outlines of lakes are not shown on this map.

Well known countries of which accurate maps have already been made are shaded in grey.
1,200 Miles.

sail into the waters of the "Impenetrable Sea" and open up the "Dark Ocean," regard their missionaries of the sixteenth century as the pioneers in the chief discoveries made in the interior of the continent. Yet long after the time of these missionaries, the maps of Africa continued to be disfigured by the names of peoples described as the "Tongueless," the "Noseless," the "Opistodactyles," with fingers grown backward, or of "Pygmies fighting the cranes for their food."

* D'Avezac, "Esquisse générale de l'Afrique."

In our days geographical results are so carefully recorded that there can be no doubt as to the routes followed by travellers in the interior, and we are enabled, at least roughly, to trace the network of the itineraries by which our knowledge of the continent has been enlarged. During the last hundred years—that is, since the foundation in 1788 of the English Society for the exploration of Africa, whose first heroes and victims were Mungo Park and Hornemann—the whole continent has been several times crossed from sea to sea. Livingstone, Cameron, Stanley, Serpa Pinto, Massari, Wissmann, Buonavanti, have all performed this exploit, while scores of other less distinguished explorers have penetrated in some directions thousands of miles from the seaboard. Nor is mere distance always a measure of the importance of these expeditions, and many trips of short duration deserve to find a place in the records of African discovery. Sufficient data have already been obtained to prepare complete maps of certain coastlands, such as the Cape, the Nile Delta, Tunis, Algeria, while the list of positions astronomically determined comprises several thousand names, and is daily increasing. Scarcely a week passes without bringing the news of some fresh geographical conquest. The routes of explorers are so interlaced, and overlap each other at so many points, that few blank spaces of great extent remain to be filled up; and even in the unexplored regions enough is known of the general trend of rivers, valleys, and mountain ranges to at least facilitate the work of future expeditions.

At present the greatest extent of *terra incognita* lies parallel with the equator north of the Ogowé and Congo, stretching from the Crystal Mountains and those of Mfumbiro and Gambaragara, between the Nile and Congo basins. It comprises an area of at least 400,000 square miles, or about the thirtieth part of the whole continent. But it is already being approached from several points around its periphery, and so recently as December, 1883, the last link was completed of the permanent stations reaching by the Congo route from the Atlantic to the Indian Ocean. The continent is now traversed from shore to shore by a continuous line of exploration.

The whole of Africa might perhaps have already been discovered had all the white explorers made the way easy for their successors by considerate treatment of the natives. By their humane conduct men like Speke, Livingstone, Barth, Piaggia, Gessi, Schweinfurth, Emin-Bey, ward off dangers from those following in their footsteps; but, on the other hand, many needless obstacles have been created by the threats and violence of less sympathetic pioneers. At the same time it must be confessed that whatever policy they may adopt, all alike are mistrusted by the aborigines, who have too often good reason for regarding them as forerunners of warlike expeditions. Thus even the best of Europeans are in some respects necessarily considered as hostile, their very success inviting the presence of less scrupulous followers. How often must the humane explorer, while accepting the hospitality of some native chief, reflect with feelings akin to remorse on the future which he is preparing for his generous hosts! However unintentionally, he leads the way for the trader and the soldier, thereby insuring the ruin of his friendly entertainers. To justify himself in his own eyes, he is

fain to reflect that wars and conquests and violent annexations are the inevitable preliminaries of universal peace and brotherhood.

Most of the African seaboard has already been seized by various European states, and every fresh discovery in the interior enables their officials, troops, and collectors to penetrate farther inland. Trade also expands from year to year, and the foreign exchanges of Egypt alone now exceed those of the whole continent during the last generation, which in 1860 were estimated at about £38,000,000. Highways are being constructed from the coasts towards the inland plateaux, whereby future expeditions must be greatly facilitated. Lines of railway have even begun to wind their way from a few seaports along the neighbouring valleys, here and there scaling the escarpments, and slowly moving towards the centre of the continent, where they must one day converge. To these first links, starting from the coasts of Egypt, Tunis, Algeria, Senegambia, the Cape, and Natal, others will soon be added, resembling the trenches cut by a besieging force round the ramparts of some formidable stronghold. The whole of Africa may thus be compared to a vast citadel, whose disunited garrison of some two hundred million men, acting without unity or concert, must sooner or later open their gates and capitulate to their European conquerors or patrons. For the possession of the interior must inevitably fall ultimately to the masters of the sea and surrounding coastlands. Even were any of the central states temporarily to acquire command of the seaboard, they would be compelled to treat with some maritime European power, and thus prepare the way for the invasion of their territories. Thus, although not yet completely discovered, Africa is none the less, from the political standpoint, already a mere dependence of Europe. By the opening of the Suez Canal it has been doubly severed from Asia. To the European States thus belongs the exclusive privilege of introducing a new civilisation into the Dark Continent, and restoring to the inhabitants, under another form, the very culture which Europe herself received from the people of the Nile Valley.





CHAPTER II.

THE NILE BASIN.

THE RIVER.



DESCENDING from the south to the north, and in its lower course traversing broad open plains, the Nile gives, as it were, a general inclination to the whole of North-East Africa towards the Mediterranean basin. Notwithstanding a difference of outline, its delta corresponds to another opening at once maritime and fluvial, that of the Dardanelles and Bosphorus, through which the regions watered by the streams of East Europe also slope towards the Mediterranean. Thus like an inner within an outer circle, there is developed in the centre of the Old World a zone of riverain lands, forming, so to say, a little world apart, and comprising such famous historical cities as Memphis, Alexandria, Jerusalem, Tyre, Antioch, Ephesus, Miletus, Smyrna, Athens, and Constantinople.

In the length of its course the Nile is one of the great rivers of the world, and by many of the tribes along its banks the earth is supposed to be divided into two parts by this mysterious stream, coiled like a snake round the globe and grasping its tail in its mouth. It certainly exceeds all the other rivers of the eastern hemisphere, not excepting the Yangtze-Kiang or the three great Siberian arteries. In this respect it even surpasses the Amazon itself, and probably yields to the Missouri-Mississippi alone. Yet the chief river falling into the Victoria Nyanza, and thus forming the true upper course of the Nile, has not yet been determined with absolute certainty. It may even be larger than has been supposed, so that calculating from its farthest source south of the equator, the African river may possibly be superior in length to its North American rival. But taking it from the Nyanza alone, it is at least 3,750 miles long, and in a straight line along the meridian from lake to sea the distance is thirty-one and a half degrees of latitude, or about 2,100 miles.* But to reach the farthest headstreams of the Nile basin we

* Length of the Missouri-Mississippi	4,230 miles.
" " Nile, with the Nyanza headstream	4,200 "
" " Amazon, with the Apurimac	3,600 "
" " Irtysh-Ob.	3,410 "
" " Selenga-Angara-Yenisei	3,300 "
" " Vitim-Lena	3,290 "
" " Yangtze-Kiang	2,790 "

should perhaps descend over five degrees to the south of the equator and two to the east of the emissary from the great lake. The winding of its bed lengthens its whole course by over three-fourths.

In superficial area the Nile basin is inferior both to the Amazon and the Mississippi, and apparently about equal to the Congo.* Except in its middle course, between the Makrara territory and Abyssinia, the lateral river valleys are of slight extent, and owing to the arid character of most of its basin, it cannot compare in volume to any of the other great rivers of the world. According to recent estimates, the Atrato, which falls into the Carribean Sea near the Isthmus of Panama, has a greater discharge, although its basin is nearly a hundred times smaller than that of the Nile.

The general tilt of the land from the central plateaux to the shores of the Mediterranean coincides with the Nile Valley. Nevertheless to its main fluvial arteries the whole of this region is exclusively indebted for its geographical unity. The lacustrine uplands of the interior, the marshy tracts where its chief affluents join the White Nile from the south-west, the isolated Abyssinian highlands, the Kordofan uplands encircled by solitudes, the Nubian deserts, the narrow winding valley of Upper Egypt, lastly the smiling plains through which the main stream ramifies as it approaches the Mediterranean, are all so many distinct geographical domains, which must have had a purely local development but for the unity imparted to them by the hydrographic system of the Nile. Thanks to the facilities for communication afforded by this great water highway, its lower reaches were peopled by Nubian colonies from remote times; the old Egyptian culture advanced up to Meroe, and even farther south; frequent wars were waged between the Ethiopians and the lowlanders for the command of the stream; and for centuries Egyptian viceroys have made incessant efforts to extend their possessions to the whole of the Upper Nile basin as far as the equatorial lakes and the "Great Divide." Along this main highway of North-East Africa the natural divisions between the riverain populations are marked by the obstructing cataracts and the confluences of the great affluents. Hence the study of the stream to which the surrounding lands owe their historic evolution claims our first attention.

The ancients asserted that the Nile had its source in the "Mountains of the Moon," and it is noteworthy that the southernmost affluents of the lacustrine system whence it escapes were met by Speke in the "Land of the Moon." But amongst these affluents is there one copious and large enough to be regarded as the main upper stream? This "head of the Nile" is still being sought, and as in the time of Lucan, no one can yet boast of having seen the farthest source of the Nile. According to the maps prepared from the itineraries of Stanley, Smith, Pearson, and the French missionaries, the Mwaru (Liwumba, Luwambé), which rises beyond the fifth degree of southern latitude, and flows north and north-west towards the

* Approximate area of the great river basins:—

Amazon	. . . . .	2,800,000 square miles.
Mississippi	. . . . .	1,390,000 " "
Nile	. . . . .	1,340,000 " "
Congo	. . . . .	1,280,000 " "

Nyanza, would appear to be the true "Nile of the Moon," at least in the length of its course. But if the barometric altitudes taken by Pearson can be trusted, this stream cannot possibly reach the lacustrine basin, for it flows at a lower level. On the other hand, it cannot trend westwards in the direction of Lake Tanganyka, from which it is separated by ridges some 500 feet high.* Hence it probably runs out in some landlocked basin.

Speke was informed by the natives that this region, comprised between the great lake and the lofty coast ranges, is studded with lakes and salines, like those heard of by Denhardt, Erhard, and Wakefield as lying further north. Till recently copious streams might still be supposed to flow from the western slope of Kilima-Njaro, the giant of African mountains, whose two snowy peaks rise some 240 miles to the east of Nyanza. But the waters escaping from the gorges of this volcano flow mainly east and south to the Indian Ocean, while the rivulets descending from its west side lose themselves in the depressions of the plateau. None of the watercourses observed by Stanley and other travellers on the east side of Nyanza are of considerable size, and all of them rise at some distance from Kilima-Njaro.

The water-parting between the Indian Ocean and the Nile is lower than the eastern ranges, and has rather the appearance of an elevated cliff terminating abruptly eastwards, and sloping gently towards the west. Above it at intervals rise volcanic cones, and the statement of the Arabs, that several of them still show signs of activity, has been recently confirmed by the evidence of the traveller Fischer. Eruptions are even said to occur, and two of the cones take the name of Dunyé-M'buro, or "Smoky Mountain." Another is known as the Dunyé-Ngai, or "Heavenly Mountain," and copious thermal streams flow from the fissures. The foot of the eastern escarpments, some 4,320 feet high, is skirted by a thermal lake, which is continued by swampy tracts where soda is deposited. In this district the chain of volcanoes is separated by a deep depression from Kilima-Njaro, and the lake itself is little over 2,000 feet above sea-level.

Of all the affluents of Lake Nyanza, the Kagera (Tangurú or river of Kitangulú), which joins it from the west, has the best claim to be considered as the main head-stream of the basin, at least so far as regards its volume. This river, which by its first explorers was named the Alexandra Nile, rises in a highland region some 60 miles south of the equator, and nearly 2,340 miles in a straight line from the Mediterranean. After collecting the torrents from Mount Mfumbiro it takes a normal north-easterly course towards Nyanza. Stanley penetrated into the valley of this Upper Nile below its confluence with the emissary of Lake Akanyaru, which had also received the name of Lake Alexandra even before it had been actually visited by any European. In the district explored by Stanley the Kagera traverses several lakes and receives the overflow from other lacustrine basins, flooding the surrounding depressions. It has a mean depth of fifty feet, and the horizon is completely shut out by the tall masses of papyrus fringing its banks. Speke and Grant, who were the first to visit this Upper Nile, crossed it much lower down, below the Morongo Fall, one or two days' march from its confluence with Nyanza.

* E. G. Ravenstein, "Map of Eastern Equatorial Africa."

The Kagera is evidently a very copious stream, which during the rainy season overflows its banks for several miles, in a way that reminded Grant of the Hugli between Calcutta and Chandernagor. When Speke crossed it in January, 1862, that is, at low water, it was only 250 feet wide; but here it resembled a canal cut through dense masses of reeds, and was too deep for the boatmen to employ their poles. Its current is very rapid, running at least $3\frac{1}{2}$ miles an hour and at its mouth forming a large estuary over 430 feet wide, and varying in depth from 80 to 130 feet. For several miles from the shore its dark grey stream continues to flow in a separate channel without intermingling with the blue waters of the lake.

The natives have a great veneration for their river, and one of the titles they give it seems to justify the hypothesis that it is really the main headstream of the Nile. According to Stanley they call it the "mother" of the "Stony Current," that is, of the emissary of Lake Nyanza in Uganda. At its north-west angle the lake is joined by the Kalonga, another copious river rising in the west in the neighbourhood of Lake Mwutan-Nzigé. Although it has a course of over 120 miles, its volume is certainly inferior to that of the Kagera.

LAKE VICTORIA NYANZA.

The Nyanza, that is "lake" in a pre-eminent sense, known also as the Ukerewe, and now as the Victoria Nyanza, is the largest lacustrine basin in Africa. According to Stanley's provisional map, which will soon be superseded by the more matured work of Mackay, it is exceeded in superficial area only by one other lake—Superior, in North America.* Both Michigan and Huron are smaller by several thousand square miles; and Aral itself, although generally designated by the name of "Sea," appears to yield in extent to Nyanza.

In the depth of its waters also this vast basin rivals the great lacustrine cavities of the world. In the immediate neighbourhood of the east coast, and close to some islands and islets, the sounding line recorded a depth of 590 feet, which may probably be exceeded in the middle of the lake. Should this prove to be the case, Nyanza will take the first place amongst fresh-water basins for the volume of its liquid contents. Its altitude above the sea has been variously estimated by different observers, but 4,000 feet has been provisionally adopted as not far from the truth.

By Speke, who discovered it in 1858, this great inland sea has been named the Victoria Nyanza, in honour of the Queen of England. But every tribe along its shores gives it a different name, while the Swaheli of Zanzibar know it as the Bahari-ya-Pila, or "Second Sea." Many other names also occur in history which evidently have reference to this sheet of water. The title of Kerewe is taken from Ukerewe, the largest island on the south coast, which is separated from the mainland by the narrow strait of Rugeshi, a mere ditch almost completely choked by

* Area of the chief lakes of the world :—Superior, 33,500 square miles; Nyanza, 26,600; Aral, 26,300; Huron, 24,500; Michigan, 23,600; Erie, 11,300.

the papyrus and other aquatic plants. But according to Wilson the most general appellation is simply Nyanza, that is, the "lake" in a superlative sense.

South of Ukerewe a large bay penetrating far inland has by Stanley been named after Speke, his precursor in the exploration of equatorial Africa. The stagnant pools and lagoons fringing this inlet are infested by crocodiles of enormous size. Others, which frequent the reedy banks of the Tangurú, are by the natives regarded as demi-gods, personifying the tutelary deity of the stream. Some of the islands are in the undisputed possession of fierce hippopotami, grouped in regular tribes and families, which tolerate the presence of no other large animals in their respec-

Fig. 10.—SOURCES OF THE NILE AND NYANZA PLATEAU.

Scale 1 : 7,200,000.



five territories. For the capture of these monsters the natives have constructed boats of a peculiar build; but such hunting expeditions are always attended with great risk.

The coastlands, which apart from a thousand small indentations have a circumference of over 720 miles, present an endless variety of landscape. Along the rocky shores the prevailing formations are everywhere gneiss, granite, or basalts. But in some places the riverain tracts spread out in level, treeless plains, while elsewhere the margin of the lake is skirted by high hills and even mountains diversified with patches of verdure and enlivened by groups of villages. Between

the Kalonga and Tangurú rivers the coast is generally low, and here the shallow water nowhere exceeds a few feet in depth for two or three miles from the land. But farther south the shore is fringed by bare cliffs, varied with strips of red or orange lichens, giving them the appearance of blocks of iron, and several have in fact been found to consist of ferruginous ores.

The most charming prospects are displayed towards the north-west in the territory of U-Ganda. Here the inlets along the coast appear to be divided by the intervening wooded headlands into lakelets of unequal size. Limpid streams are everywhere seen sparkling amid the dense masses of verdure; down every dell flows a silvery rivulet fringed with tall grasses or shrubs, above which are interlaced the branches of forest trees. Probably no other region in Central Africa enjoys a more equable climate or a richer soil than this land of U-Ganda. The plants of the temperate zone recently introduced by Europeans thrive well.

Off the coast of U-Ganda an archipelago of four hundred islands, of which the largest group bears the name of Sessé, stretches in a continuous chain between the high sea and the creeks along the shore. The scenery of this insular world is even more diversified and its vegetation more exuberant than on the opposite mainland. Here magnificent timber clothes the slopes of the hills down to the beach, which is everywhere bordered by masses of papyrus. Towards the west the basalt island of Bukerebé, Stanley's Alice Island, raises its blackish walls over 300 feet above the lake. But of all the insular masses lining the shores of Nyanza, the most remarkable is that to which Stanley has given the name of "Bridge Island." This rock, which lies not far from the north-east corner of the lake, consists of two basaltic columns connected by an irregular elliptical arch with a spring of about twenty-four and a depth of twelve feet. Trees have struck their roots deep into the interstices of the rocks, which, overgrown with brushwood and tall grass, leave nothing visible except two columnar masses of verdure hanging in graceful festoons down to the water. Through this archway of tropical vegetation a glimpse is afforded of the hazy coast-range bounding the horizon on the opposite mainland.

The beauty of the Nyanza scenery is enhanced by the native craft which enliven its waters, and which are at times grouped in large fleets. Some of the surrounding communities have sailing-boats; the traders have launched vessels of considerable size, resembling the dhows of the Zanzibari Arabs, and the European missionaries have constructed sloops on the English model. But most of the skiffs are still of a primitive type, mere barges with round sterns sunk deep in the water, and sharp prows projecting clean above the surface and adorned with two antelope horns and a bunch of feathers. From a distance they present the appearance of an animal raising its neck above the water in search of prey. These boats, manned by crews of from ten to forty-eight hands, carry neither mast nor sail, and are propelled only by the paddle. Rudely constructed of trunks of trees lashed together with flexible branches, and caulked with a mixture of bark and mud, they offer but a slight resistance to the waves; hence accidents are frequent, although they seldom venture far from the shore.

Before the arrival of the Europeans the fleets of the king of U-Ganda seldom



VIEW OF VICTORIA NYANZA—TAKEN FROM MURCHISON BAY.

dared to approach the island of U-Vuma. The islanders, armed with nothing but a knife, would swim towards the boats, dive under the keels, and sever the connecting wooden ropes. Presently the frail craft were swamped and their crews struggling in the water. These and other dangers of the navigation insure for the divinities of the lake the respect of all the surrounding populations. The water-gods, who dwell on the islands, condescend to communicate with mortals only through their envoys, who dare not be approached by empty-handed votaries. But the steam launches must ere long deprive these local deities of their prestige and reduce them to the level of ordinary mortals. When the American Chaillé-Long wanted to embark on the lake, the king of U-Ganda struck off the heads of seven wizards who had hitherto been both worshipped and hated as the evil genii of Nyanza. By this summary process he hoped to ensure the safety of his guest. Storms and waterspouts are frequent on the lake. Wilson has also determined the existence of a current, which sets steadily from Speke Bay parallel with the coast westwards. It is caused by the south-east trade winds, which prevail throughout the greater part of the year.

The superfluous waters of the inland sea flow gently through a broad opening on the north coast over against the island of U-Vuma. This emissary, forming the head of the Nile properly so called, gradually narrows its banks to the proportions of a river, when its liquid contents are precipitated over a tremendous cascade, to which Speke has given the name of the Ripon Falls. A group of boulders, on which a few trees have taken root, stands nearly in the centre of the stream, which is here about 1,300 feet broad. Other less elevated blocks divide the current right and left, which lower down is studded with other reefs and rocks scarcely rising above the surface of the seething waters. Hence the expression Jinja, or "Stones," applied by the natives to these falls. Although they have a vertical height of 13 feet, hundreds of fishes crowding the lower reach are able to leap the rapids and pass to the upper stream, which a short distance higher up is gentle enough to be crossed by a ferry. Here the view of the lake is to a great extent concealed by a wooded headland, while the line of separation between the gulf and the course of the river is marked by a low peninsula crowned with a clump of palms. The hills of the mainland merge farther on in the verdant isles of the lake.

THE SOMERSET NILE.

According to Stanley, the Kivira, as the Nile is here called, is about a third larger than the Tangurú, the chief affluent of Nyanza. It flows with a mean breadth of 550 yards, at first towards the north-west, and after passing a few smaller rapids, spreads out right and left in vast reedy lagoons. But even here its normal depth is maintained, and some 60 miles below the falls it enters the Gita-Nzigé, another lake, to which the name of Ibrahim has been given by Chaillé-Long, who discovered it in 1875. Compared with the other equatorial basins, it is of small extent, having an area of probably not more than 200 square miles. In this region the Nile receives a number of tributaries, including the Luajerri, which

rises in the U-Ganda hills near the shores of Nyanza, and which was supposed by Speke to flow from the lake itself. On his map he sketched a third emissary, the Kafu, which after a course of about 120 miles joined the Nile lower down. But such a phenomenon as three rivers flowing from the same lake and meeting again after traversing a hilly region would indeed be remarkable. In point of fact the Kafu, like the Luajerri, rises not in, but near the lake, with which it has no communication.

Soon after leaving Lake Ibrahim the Nile is described by Chaillé-Long as again expanding into a vast morass covered with vegetation, and with a mean depth of scarcely more than 10 or 12 feet. This is the Kioja or Kapeki lagoon, which was discovered by the Italian explorer Piaggia, and a short distance below which the Nile is joined by the navigable river Kafu. Farther on it describes a bend towards the east and north, after which it trends abruptly westwards to its confluence with the great lake Mwútan-Nzigé, or Albert Nyanza. Throughout this section of its course the Nile is usually designated on English maps by the name of Somerset.

The river, which has here a mean breadth of over 1,300 feet, would be perfectly navigable but for its precipitous incline. According to the approximate measurements taken by travellers, the total fall in this distance of about 90 miles appears to be 2,310 feet, or about 1 in 205 feet. The Kuruma, the first fall occurring in this part of the Nile, is rather a rapid, where the water, confined between walls of syenite, escapes in sheets of foam down a total incline of about 10 feet. But this is followed by the Tada, Nakoni, Assaka, Kadia, Wadé, and Ketutu Falls, forming the chief barriers to the Nile on its descent from the high plateaux. In a space of 18 miles it passes from gorge to gorge, rushing over rocky boulders, filling the atmosphere with vapours, which are precipitated as rain on the trees lining its banks. The action of the stream has, so to say, sawn through its stony walls, while gradually lowering its level. On the south bank the cliffs rise to a vertical height of from 140 to 160 feet above the boiling waters.

This boisterous course of the Somerset Nile terminates in a magnificent fall. For about 12 miles above it, the bed of the river is so steep that rapids follow in quick succession, with a mean incline of at least 10 in 1,000 yards. Suddenly the current, contracted to a width of scarcely more than 160 feet, is precipitated over a ledge between two black cliffs, plunging from a height of 115 feet into a cauldron of seething waters, above which floats an iridescent haze quivering in the breeze. Some 300 feet above the ever-restless flood the cliffs are fringed with the waving branches of the feathery palm. To this cataract Baker, its discoverer, gave the name of the Murchison Falls, in honour of the learned president of the English Geographical Society. Almost immediately below its last eddies the water becomes quite still, expanding to a breadth of from 500 to 800 feet without any perceptible current, and resembling a backwater of Lake Albert Nyanza rather than the continuation of a rapid stream. This phenomenon is said to be due to a lateral affluent flowing north-west to the Lower Nile without traversing the lake, and constituting the real main stream.

LAKE ALBERT NYANZA.

The lake discovered by Baker, and by him named the Albert Nyanza, is known to the people on its east bank as the Mwútan-Nzigé, or "Grasshopper Sea." Others call it the "Great Water," although far inferior in extent to the Victoria Nyanza. It stretches south-west and north-east for a distance of about 90 miles, with a mean breadth of over 18 miles. According to Mason's rough survey it has a superficial area of 1,850 square miles, and stands at an altitude of 2,300 feet. From the Victoria to this lower basin the Nile has consequently descended nearly half of the entire elevation of the continent between the plateaux and the Mediterranean. Like the Dead Sea, the Mwútan-Nzigé seems to fill a fissure in the earth's crust. It is enclosed right and left by steep mountains, whereas at its northern and southern extremities it terminates in gently shoaling bays and low-lying beaches. The high cliffs on the east side, consisting of granite, gneiss, and red porphyry, form a first stage in the ascent towards the U-Nyoro and U-Ganda plateaux. The streams flowing from the swamps on these uplands have not yet completed their work of erosion by furrowing regular channels across the outer scarps of the plateau. Hence, like the Nile at Murchison Falls, they have all still to make their way through cataracts, where the volume of water is less but the fall much greater, being approximately estimated for most of them at about 320 feet.

Livingstone and other explorers of Central Africa supposed that Lake Tanganyika belonged to the Nile basin, sending its overflow north-eastwards to the Albert Nyanza. But subsequent investigation has shown that the two lakes have no communication with each other. During their trips round the latter, both Gessi and Mason ascertained that from the south it receives no affluent except a shallow, sluggish stream, almost choked with vegetation. In this marshy district it is covered with a floating or half-submerged forest of ambach (ambaj), a leguminous plant (*herminiera elaphrocylon*), 18 or 20 feet high, with star-shaped leaves and golden yellow flowers like those of the broom. Its wood, which resembles cork in appearance, is the lightest known to botanists, so light that a raft strong enough to support eight persons forms the load of a single porter. It grows so densely that the native boats are unable to penetrate the tangled masses of vegetation springing from the muddy bottom of the lake. Beyond this aquatic forest Gessi beheld a vast prairie rolling away between two steep mountains, which formed a southern continuation of the coast ranges.

Lake Albert, continually renewed by contributions from the Nile, is everywhere sweet and pure, except in the southern shallows, where the water is turbid and brackish, and in some places on the east side, where it mingles with saline springs, utilised by the people of U-Nyoro. Although no distinct undercurrents have been observed, the navigation is rendered very dangerous by the sudden squalls sweeping round the headlands and down the mountain gorges. When embarking on their frail craft the natives never fail to cast some valued object into the lake as a propitiatory offering to the water-gods. A chief, one of Baker's friends,

obtained from him a quantity of glass trinkets for the purpose of insuring the stranger's safety by employing them in this way. But since those first visits Lake Albert, already temporarily annexed to the Khedive's possessions, has been navigated in every direction by two steamers, which to pass the Nile cataracts had to be taken to pieces and put together again above the last portages. The transport of the *Khedive* required no less than 4,800 hands, of which 600 were needed to haul the boiler across the swamps, through the woods, and over the hills. The escarpments along the east coast are far more elevated than those on the opposite side.

It is sometimes asserted that the Nile traverses Lake Albert without mingling with the surrounding waters. But recent inquiry has shown that such is not the case. According to the varying temperatures, the warmer fluvial current spreads in a thin layer over the surface of the lake, gradually blending with it under the influence of the winds. But when the stream is colder it descends to the lower depths of the lacustrine cavity, where it replaces the lighter fluid. Hence, although the inflow is distant scarcely 12 miles from the outflow, the Somerset Nile becomes lost in the great lake, whose superfluous waters must be regarded as the main feeder of the emissary.

THE WHITE NILE.

This emissary, variously known as the Kir, the Meri, the Bahr-el-Jebel, or "Mountain River," and by other names according to the dialects of the riverain populations, flows normally north and north-east in a tranquil stream winding at a width of from 2,000 to 6,500 feet between its verdant banks. In the middle of the channel the depth varies from 16 to 40 feet, so that throughout the year it is accessible to large vessels for 120 miles below the lake. The shores are fringed with wooded islands and islets, while large masses of tangled vegetation drift with the current, especially at the beginning of the floods. These floating islands consist of a substratum of decomposed foliage and reeds strong enough to support an upper layer of living vegetation, by whose roots and tendrils the whole mass becomes solidly matted together. During the course of five or six years the flora becomes renewed, the surface growth decomposing in its turn, and causing the aquatic garden to break up and float away in smaller sections with the stream. But it often happens that the vegetable refuse accumulates in sufficiently large quantities to enable these floating islands to strike root here and there in the bed of the stream, and in the Nile basin whole rivers have sometimes been covered with such buoyant masses, firm enough to bear even the weight of caravans. Owing to the rapid development of this rank vegetation, the Nile has frequently been choked in its upper reaches and compelled to cut new channels in the surrounding alluvia. On the plains stretching west of the present Nile traces are seen in many places of these old beds, or "false rivers," as they are called. The low chain of hills skirting this plain on the west, and forming the water-parting between the Nile and Congo basins, might not inaptly be named the "Explorers' Range." The crests following

from south to north bear the names of Schweinfurth, Junker, Chippendall, Speke, Emin, Baker, Gordon, and Gessi.

The great bend described by the Nile below the Dufli station, at an elevation of about 2,100 feet above the sea, marks a very important point in the hydrography of its basin. Here it is joined by several copious affluents, including the Asua or Asha, supposed by some geographers to flow from Lake Mbaringo (Baringo, Bahr Ingo), which Speke at one time identified with a north-east inlet of Victoria Nyanza, and whose very existence has since been questioned. But the question has been practically settled by Thomson, who visited the district in 1884, and who determined the existence of Baringo and another large lake farther south.

The Asua, however, rises not in a lake, but in a hilly region east of the Somerset Nile, while the Mbaringo is a landlocked basin without any outflow. At their junction both the Nile and the Asua, skirted right and left by hills, are obstructed by reefs, and even above the confluence the navigation of the main stream is completely obstructed by the Fola Rapids, which Wilson has named the "Eighth" Cataract. Here all vessels on the Upper Nile have to stop and tranship their cargoes, an inconvenience which has caused the Nile route to be almost abandoned above the rapids. After leaving the bend at Dufli, caravans for Victoria Nyanza strike south-eastwards, rejoining the Somerset Nile at Foweira, above the Karuma Rapids. This route, which has also been taken by the recent military expeditions from Egypt, is twice as short as that by the winding valley of the river.

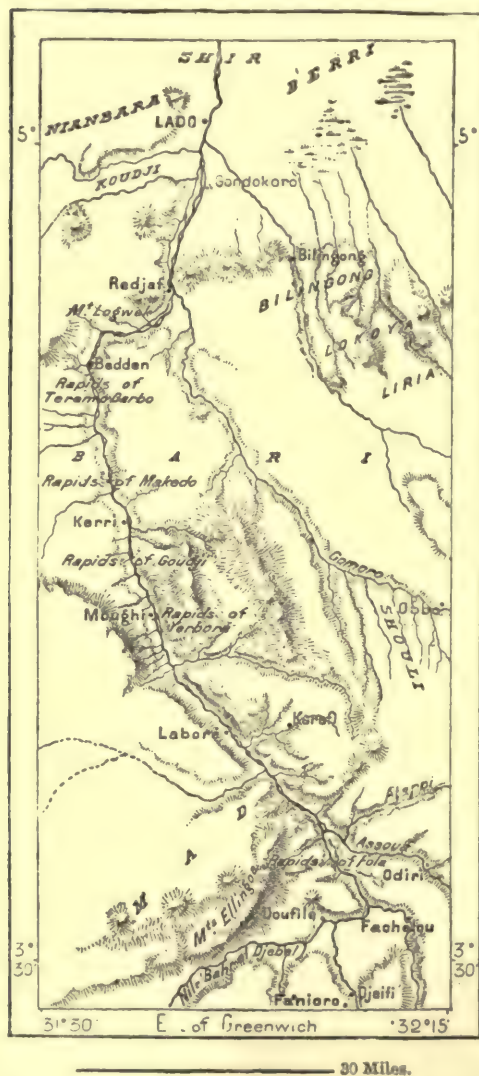
Below the Asua confluence the Nile is still obstructed here and there by rocky ledges, as at Yerbora, where it rushes between huge boulders, at Makedo, where it develops two falls over six feet high, and at Teremo-Garbo and Jenkoli-Garbo, where other rapids occur. But all of these impediments may be passed during the floods. Steamers freely ascend for nine months in the year as far as Ragat or Rejaf, and to the winding at Bedden below the falls forming the "Seventh" Cataract. But during low water they are unable to get beyond the famous station of Gondokoro, or Ismailiya, which was long the capital of Upper Egyptian Sudan. The head of the navigation for large vessels is indicated by the sandstone eminence of Rejaf, a perfectly regular cone of volcanic appearance terminating in a tower-shaped rock, which rises over 330 feet above the surrounding plain.

At this point the Nile, according to the estimates of Dovyak and Peney, has a normal discharge of about 20,000 cubic feet, oscillating between 10,000 at low and 30,000 at high water. During the floods it presents an imposing appearance at Gondokoro and Lado (Lardo), the new capital of the province of the equator. But flowing through an almost level plain, it soon ramifies into numerous lateral channels, while other secondary streams, intermingled with marshes and lagoons, wind right and left of the Bahr-el-Jebel, or Kir, as this section of the Nile is called by the Dinkas. The main stream itself branches off completely, the Nile proper continuing its north-westerly course, while the Bahr-ez-Zaraf, or "Giraffe River," winds for 180 miles through swamps and prairies northwards to a point where the two branches again unite. The Zaraf is described by Marno not as a

river in the proper sense, but merely a *khôr* or watercourse, which is becoming yearly less navigable, and already inaccessible to boats except for a short time during the floods. The whole low-lying region at present intersected by the Bahr-el-Jebel, the Zaraf and all their countless affluents, channels, and branches was evidently at one time a vast lake, that has been gradually filled up by the

Fig. 11.—FROM DUFIË TO LADO.

Scale 1 : 1,500,000.



alluvia of these rivers. Its northern margin is indicated by the abrupt change in the course of the Nile at the confluence of the Bahr-el-Ghazal, or "Gazelle River." At this point the whole system of waters is collected in a single channel, which is deflected eastwards along the escarpment of the upland Kordofan plains. A cavity of the old depression is still flooded by a remnant of the lake called the No, Nu, or Birket-el-Ghazal, which, however, under the action of the currents and periodical floods, is continually overflowing its marshy banks, shifting its place and modifying its outlines.

Nowhere else is the Nile more obstructed by vegetable refuse as along this section of its course. The floating islands drifting with the current being arrested by the abrupt winding of the stream are collected together, and stretch at some points right across the channel, which thus becomes displaced. But the new channel is soon blocked by fresh masses of *sedd*, as it is called, which in many places covers a space of twelve miles. This *sedd* often acquires great consistency, supporting a dense growth of papyrus, and even of arborescent vegetation, beneath which the main stream continues its sluggish course. Numerous families

of the Nuer tribe pitch their tents on the verdant surface, living exclusively on fish caught by piercing the foundations of their dwellings, and on the grain of various species of *nymphæacæ*. In certain places along the banks of the river and surrounding swamps are seen myriads of earth-mounds, all raised above the highest level of the inundations by their architects, the termites, who ascend and descend from story to story with the flowing and ebbing stream. One of the most

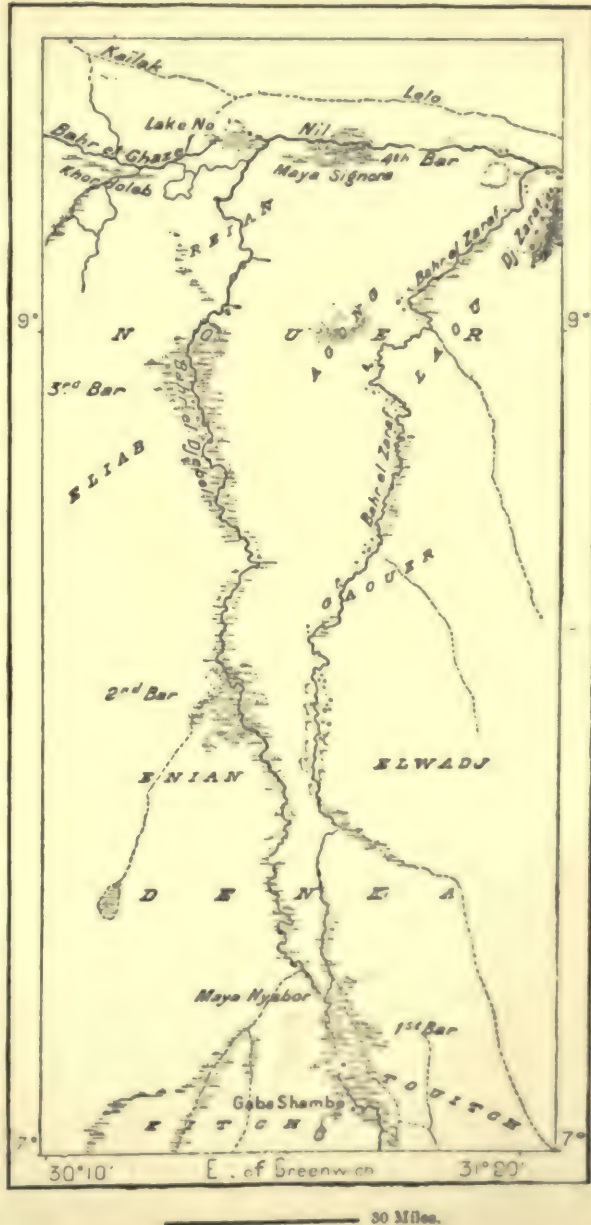
remarkable inhabitants of this watery region is the *baleniceps rex*, a curious long-legged aquatic bird with grey plumage, which when perched on a termite's hillock looks from a distance like a Nuer fisherman.

From the time when the envoys of Nero failed to penetrate the sea of floating vegetation, explorers of the Nile have been frequently arrested by this obstacle. During the latter half of the present century most of them have had to force their way through the tangled masses, and one of the channels thus formed by Miss Tinne's steamer still bears the name of Maya Signora. During the seven years from 1870 to 1877 the river was completely blocked, obliging all travellers to continue their journey by the Bahr-ez-Zaraf. Many were detained for weeks and months on these pestiferous waters, over which hover dense clouds of mosquitoes. Here Gessi was arrested in 1880 with five hundred soldiers and a large number of liberated slaves, and three months elapsed before an Egyptian flotilla, under Marno, was able to rescue them by opening a passage from below. Devoured by the insects, wasted by fever, and reduced to live on wild herbs and the dead bodies of their unfortunate comrades, most of the captives found a grave in the surrounding swamps, and nearly all the survivors perished of exhaustion soon after. Gessi himself outlived the disaster only a few

months. To the lagoon of No must be attributed those "green waters" noticed at Cairo during the early days of June, when the stream, charged with vegetable

Fig. 12.—REGION OF THE "SUD."

Scale 1 : 2,000,000.



cellules, acquires a marshy taste and becomes unwholesome. But all this refuse is swept away or destroyed by the first floods from the Abyssinian rivers, which thus restore to the Nile water its excellent properties.

The "Gazelle," which joins the main stream in the No basin, is a "bahr," that is, a considerable river, flowing from the west, and during the floods bringing sufficient water to sweep away the temporary obstructions. In its channel are collected a hundred other rivers, whose numbers and copiousness form a striking contrast to the poverty or total absence of running waters characteristic of the Nile basin farther north. Altogether the affluents of the great river are dis-

Fig. 13.—THE NILE AT KHARTUM.



tributed very irregularly, thus illustrating, as it were, the discrepancies of the climate. In the region of the plateaux the Victoria Nyanza and Somerset Nile receive feeders both from east and west, for the rainfall is here sufficiently heavy to cause watercourses to converge from all directions in the great lacustrine reservoir. But north of the Albert Nyanza the affluents occur alternately now on one now on the other bank of the Nile. In the section of its course terminating in the No lagoons it receives contributions only from the west, and farther north only from the Abyssinian highlands lying to the east. Then for a distance of 1,500 miles no more permanent tributaries reach its banks either from the right or the left. Even during the rainy season the gorges opening on its valley send



GENERAL VIEW OF KHARTUM.



down very little water, and none at all for the rest of the year. Unique in this respect among the great rivers of the globe, the Nile seems for the greater part of its course to be a river destitute of tributary basins. On its west bank nothing occurs for 2,200 miles from its mouth except some wadies flushed during the rains.

But then follows a sudden and remarkable contrast, due to the changed climatic conditions. All the triangular region comprised between the Bahr-el-Jebel, the Nile, and Congo water-parting, and the Dar-For uplands, is intersected by numerous perennial streams nearly converging in the direction of the old lacustrine basin now filled with alluvia and vegetable refuse. With their minor headstreams and affluents they form a vast and intricate hydrographic system, extremely difficult accurately to survey, especially owing to the varied and shifting nomenclature. Like the Nile itself, every secondary branch bears as many names as there are tribes in its valley or neighbourhood. The most important appear to be the Yei, which is lost in the swamps bordering the left bank of the Nile; the Rol, flowing to the Bahr-el-Ghazal; the Roa and Tonj, whose united waters form the Apabu; the Diur, which reaches the Bahr-el-Ghazal near Meshra-er-Rek, and which is the most copious of its many affluents; the Pango, a branch of the Diur; lastly the Famikam, better known as the Bahr-el-Arab, which forms the northern limit of the whole region, and which, after its junction with the Ghazal, deflects the Nile eastwards.

Most of these streams have a very gentle incline, the most rapid being those that take their rise in the mountains near lake Albert Nyanza. Some have their source altogether in the plains, offering an almost imperceptible transition to the basin of the Congo. In their lower course the Rol, Diur, and some others have too slight a fall to scour their beds of the vegetation constantly accumulating. The consequence is that, like the Nile, they overflow their banks, during the floods converting the whole country for some thousands of square miles into an impassable morass. A large portion of the rainfall in this part of the Nile basin evaporates before reaching the main stream. Here the annual rains represent a volume greater than the whole discharge of the Nile at Cairo.

At the point where it resumes its normal northerly course beyond the region of sedd, the Nile is joined on its east bank by the Sobat, which is also known by a great variety of names.* The Sobat, which drains a very large area, and which

* Nomenclature of the Upper Nile and its affluents:—

Nile: Kivira, Somerset (between lakes Victoria and Albert); Meri (in the Madi country); Karré (by the Bari people); Kir (by the Denkas); Yar (by the Nuer); Bahr-el-Jebel (by the Arabs between Lakes Albert and No); Bahr-el-Abiad, or "White River" (by the Arabs below the Sobat).

Yei: Ayi, Doghurguru, Jemid, Rodi, Bahr-Lau.

Rol: Nam-Pol, Ferial, Welli, Yabo, Nam-Gel.

Roa: Meriddi, Bahr-jau.

Tonj: Tondy, Lessi, Doggorn, Kuan.

Diur: Heré, Nyenam, Bahr-Wau, Ugul, Relaba.

Pango: Ji, Dishu, Ugakaer, Bahr-el-Homr.

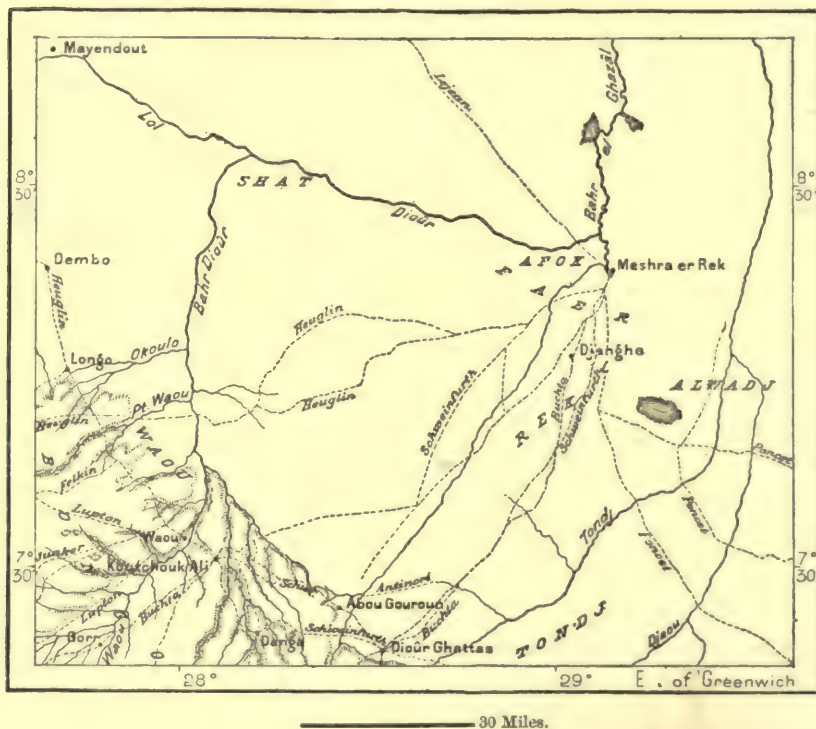
Famikam: Bahr-el-Arab, Lialui, Lol, Lollo, Komkom.

Sobat: Bahr-el-Moguté, Waik, T-lfu, Wah, or Tah (by the Shiluks), Pinyin, or Tilfi (by the Nuer), Biel, Kieti, Kidi, or Kiradid (by the Dinkas).

Russeger mistook for the Nile itself, is the first affluent that receives any contributions from the Ethiopian highlands. It frequently sends down a greater volume than the main stream, whose waters during the floods are stemmed and driven back by its current. To judge from its whitish fluid contents, in which the blackish Nile water disappears, the Sobat has the best claim to the title of Bahr-el-Abiad, or "White River." Some of its affluents rise on the low-lying plains stretching east of the Nile; but the most important has its source much farther east, in the upland valleys of the Ghesha range, which forms the water-parting between the Indian Ocean and Mediterranean basins. The Baro, which is one of the dozen different names of this affluent, on entering the plain traverses the

Fig. 14.—MESHRA-ER-REK IN THE ZARIBA REGION.

Scale 1 : 2,200,000.



marshy Lake Behair of the Arabs, or "Sea of Haarlem," as it has been renamed by the Dutch explorer Schuver. During the rainy season the Sobat sends down a vast quantity of water, on June 15, 1862, estimated by Pruyssenaere, 70 miles above the confluence, at 42,000 cubic feet per second. Hence during the floods the whole of its lower course is easily navigated; but if large craft linger too long on its treacherous flood they run the risk of being landed high and dry on some shifting sandbank, as happened to the trader Andrea Debono, who was recently detained in the river for eleven months.

It is below the Sobat that the Nile takes currently the Arab name of Bahr-el-Abiad, or "White River," by which it is generally known to Europeans above

Khartum, where it is joined by the other Nile, called the Bahr-el-Azraq, or "Blue River." The contrast is certainly striking between the two currents, the former being charged with organic remains, turbid, and muddy, while the latter, flowing from a rocky region, is generally much more limpid. But a greater contrast is presented by the variations in their respective volumes according to the seasons. The western branch, which is by far the longest, the distance from Khartum to its still undetermined source being even greater than from that place to the Mediterranean, has also the most uniform discharge. Regulated by the great equatorial lakes, and again by the swampy depressions about Lake No, its contents present comparatively less discrepancies from season to season. But the impetuous Bahr-el-Azraq partakes rather of the nature of a torrent. As soon as the tropical downpours begin to fall on the Abyssinian plateaux, the effect is felt in its rocky channel. Then its discharge exceeds that of its rival, and it was on this ground that Bruce and many subsequent explorers claimed the first rank for the Abyssinian branch. But since the discoveries of Speke, Grant and Baker, it can be regarded only as an important tributary of the Bahr-el-Abiad. Its mean volume is less considerable, nor is it navigable at low water.

THE BLUE NILE.

On the other hand, if it is the White Nile that maintains the perennial stream, to the Blue Nile is due its fertilising properties. Without the first there would be no Egypt; but for the second the soil of this region would lack its inexhaustible fertility. Not only do the Abyssinians send down their quickening waters to the Nile delta, but they also supply it with the sedimentary matter by which the land is incessantly renewed, and the never-failing return of bountiful harvests insured. In the Ethiopian highlands is solved the mystery of the Egyptian stream, yearly overflowing its banks without apparent cause, and then retiring to its bed after accomplishing its beneficent work. It is to be regretted that the discharge of both rivers has not been accurately determined, the Nilometer at Khartum serving to estimate that of the Blue Nile alone.*

At the confluence we at once enter regions known to the ancients. The Bahr-el-Azraq is the Astapus of Ptolemy, whose source was possibly known to the Romans. At least they make it rise in a lake, the Coloe Palus, although placing this lake some twelve degrees south of its actual position. Lake Tana (Tsana) is regarded as the reservoir giving rise to the Abai, which is usually taken as the upper course of the Blue Nile. But if length of course alone be taken into consideration, this honour should rather be awarded to the Beshto, which has its origin some 150 miles farther east. The Tana emissary, however, has the advantage of being much more constant in its discharge, thanks to the controlling action of the

* Approximate estimate of the discharge of the two Niles at Khartum per second :—

Bahr-el-Abiad.		Bahr-el-Azraq.	
High water	175,000 cubic feet.	High water	213,000 cubic feet.
Low water	10,000 " "	Low water	5,500 " "

lake, which rises slowly during the floods, and falls imperceptibly during the dry season. The yearly discrepancy between the levels of the lake scarcely exceeds forty inches.

The Abai, its largest affluent, rises at Gish Abai, near the north-east foot of Mount Denguiya, some 60 miles from the lake. The Portuguese colony settled in this region towards the end of the sixteenth century certainly visited the sources of the Abai; but they were first described by the Jesuit Paez, who tells us that the water, oozing from a marshy field, is collected in a limpid lake, supposed by the natives to be "unfathomable" because they cannot reach the bottom with their spears. Thence trickles a rivulet, whose course can be traced only by a surface growth of waving grasses, but which over a mile lower down emerges in the open. This is the brook to which both the Portuguese and Bruce gave the name of the Nile. The fiery exhalations often seen flitting about its source, doubtless will-o'-the-wisps, have earned for the Abai the veneration of the natives, who still sacrifice animals to the local river genius. The stream has a width of over 30 feet where it reaches the south-west inlet of the lake, and where its turbid waters have developed an alluvial delta of considerable size. But the outlet, which retains the name of Abai, is a limpid blue current fully entitled to its Arabic designation of Bahr-el-Azraq. Like most other rivers which are at once affluents and emissaries of lacustrine basins, the Abai is constantly said to traverse lake Tsana without mingling with its water. But although such a phenomenon is well-nigh impossible, a perceptible current certainly appears to set steadily from the mouth of the affluent to that of the outflow.

Tsana cannot be compared for size to the great equatorial lakes. According to Stecker's survey, it has a superficial area of scarcely 1,200 square miles, or less than the twentieth part of Victoria Nyanza. But it must have formerly been more extensive than at present, as is evident from some alluvial plains found especially on the north side. It has the general form of a crater, except towards the south, where it develops into a gulf in the direction of its outlet. Hence the hypothesis advanced by several authors that it may have originally been a vast volcanic cone, and certainly some of the rounded islets in the neighbouring waters look like extinct craters, while the surrounding shores are diversified with bold basaltic headlands. The central part of the basin is probably very deep, for even in the southern inlet Stecker recorded a depth of 240 feet. The water is extremely pure, and as pleasant to the taste as that of the Nile. Towards the south-west the shore is fringed with dense masses of a long light reed (*arundo donax*), with which the natives construct their *tankuas*, frail skiffs or rafts propelled by two or four oars, and provided with raised benches to keep the cargo dry. But very little traffic is carried on from coast to coast. Through the foliage which encircles this lovely sheet of water, little is visible except the distant hills and the conic islets rising above the sparkling surface. Herds of hippopotami are often seen on the shores, but there are no crocodiles in the lake, although the Abai below the cataract is infested by these reptiles. Nor has any European traveller seen the *aila*, a small species of manatee said by the natives to inhabit its waters; which, however, abound

in fish, chiefly cyprides of a different species from those of the Nile. A kind of bivalve also occurs, resembling the oyster in appearance and flavour.

Issuing from the lake at an altitude of 6,200 feet, the Abai flows at first towards the south-east, forming a first fall near Woreb, 5 miles below the outlet. Expanding lower down to a width of about 650 feet, it winds along through shady fields to the Tis-Esat, or Alata Falls, where it is suddenly precipitated from a height of over 80 feet into a yawning chasm shrouded in vapour. In the centre of the cascade stands a pyramidal rock surmounted by a solitary tree constantly agitated by the breeze. Immediately below this spot the Abai plunges into a winding gorge, at one point scarcely 8 or 10 feet wide, crossed by a bridge of Portuguese construction. Some 30 miles farther on it is crossed by another bridge, the central arch of which has given way, its broken fragments forming a reef amid the tumultuous waters underneath. The whole distance between these two bridges is little more than a succession of falls and rapids, with a total descent of at least 2,000 feet. Alpine masses tower to the right and left above the gorge, which seems to have no outlet. But after describing a complete semicircle round the Abyssinian plateau, the Abai emerges on the plain in a north-westerly direction. The fall in this vast circuit is altogether over 4,000 feet, while throughout its lower course, terminating at the Khartum confluence, the incline is scarcely perceptible. Here it winds in gentle meanders between its alluvial banks, which are constantly yielding to the erosive action of the stream.

During the dry season the Bahr-el-Azraq diminishes in volume downwards, and in many places may be easily forded. For more than half the year the Yabus and Tumat, its chief tributaries from the south, are apparently merely dried-up wadies, although the water still percolates beneath the sands. The Rahad, or Abu-Ahraz, also one of its large eastern affluents, which rises on the west slope of the Abyssinian border range, is completely exhausted for a long way above the confluence before the wet season. But from June to the middle of September, when the rain falls in torrents on the mountain slopes, its vast bed overflows its banks, supplying abundant water to the cultivated riverain tracts. The Dender, however, another river rising in Abyssinia, appears to be perennial. Nowhere else would it be more useful or more easy to construct reservoirs and control the discharge than in this hydrographic basin, which at the confluence of the two great arteries at Khartum stands at an altitude variously estimated at from 1,250 to 1,450 feet above sea-level.

The northern as well as the southern section of the Abyssinian plateau is also comprised in the Nile basin. But here the affluents of the great river rise, not on the western slope, but in the very heart of the highlands, close to the range forming the water-parting between the Mediterranean and the Red Sea. The Takkazé, main headstream of the whole Atbara hydrographic system, has its source at an elevation of nearly 7,000 feet, and flows at first westwards, as if to fall into Lake Tsana. But the gorge through which it descends between its crystalline schist walls rapidly attains a level far lower than that of the Ethiopian uplands. At the point where the river trends northwards it has already fallen to an altitude of con-

siderably less than 4,000 feet, and here its banks begin to be fringed by a tropical vegetation. On descending from the surrounding mountains, which are swept by cold winds, the sensation is like that felt on entering a hothouse.

THE ATBARA.

After its escape from the region of the plateaux, the Takkazé resumes its westerly course, and at last reaches the plain through a series of rugged gorges. Here it takes the name of the Setit, and is joined by the Atbara, which is much less in volume and hardly half its length; but the mean direction of its valley, beginning immediately west of Lake Tsana, is the same as that of the united streams. The Atbara, like the Mississippi on joining the yellow and turbid waters of the powerful Missouri, gives its name to the hydrographic system; the Goang, one of the tributaries of the Takkazé, rises in the north in the depression of Lake Tsana, from which it is separated only by a ridge 165 feet high. Below the confluence the Atbara, which retains the ancient name given it by Ptolemy under the form of Astaboras, gradually diminishes in volume, as does also its former affluent, the Mareb, which in its upper course describes one of those large semi-circular curves so characteristic of the Abyssinian rivers. In fact, the Mareb, or the "River of the West," as it is called by the Abyssinians from the direction of its course, may be said to have ceased to be an affluent of the Atbara. Called the "Sona" in its middle and "Gash" in its lower course, where it is only an intermittent stream, it flows northwards parallel with the Atbara, and runs out in the alluvial lands before reaching its former outlet, called by the Hadendoa nomads "Gash-da," *i.e.* "Mouth of the Gash." On visiting the country in 1864, Munzinger found that its bed had not been once flooded for twenty years. This change in the local hydrography doubtless arises from the irrigation works constructed on the left bank of the Gash. Embanked on this side, the river flows to the right, eating away its eastern and highest cliffs. Its course, formerly at right angles, now becomes parallel to the Atbara; but as it flows northwards it finally runs dry in the sands. In 1840, Ahmed Pasha, the Egyptian conqueror, tried again to divert the Gash westwards into the Atbara, but his embankment was undermined by the riverain population of the lower plain. Till recently the river Barka, or Baraka, flowing into the swamps on the Red Sea coast not far from Suakin, was also supposed to belong to the Nile basin through a branch of the Mareb. This tradition differs little from that related by Strabo, according to which a branch of the Astaboras flowed to the Red Sea. The hypothesis may perhaps be partly due to a confusion of names, for the plain stretching east of the Mareb towards the Atbara is called Barka, or Baraka, a term also applied to the channel flowing eastwards. However this be, the Axumite Ethiopians, and after them the Abyssinians, who long identified the true Nile with their Takkazé, fancied for centuries that it would be easy to divert their river into the sea and thus deprive Egypt of the water required for its crops. This illusion, however, was also entertained by foreigners, and is referred to by Ariosto in his "Orlando Furioso." Repeating the threat of

Albuquerque, who asked the King of Portugal to send him workmen from Madeira to assist him in making a new bed for the Nile to the Red Sea, Theodore, "king of

Fig. 15.—BASIN OF THE NILE AFFLUENTS.

Scale 1 : 18,500,000.



kings," boasted that he would divert the Mareb into the Barka, in order to create a famine in Egypt and compel the Khedive to capitulate.

During the dry season, the Atbara, unlike the Blue Nile, fails to reach the main stream. Its bed, 440 yards broad, is completely dry; "a desert within a desert," it is merely a waste of shimmering sands, to which the distant mirage gives the

appearance of sparkling water. But in the lower bed of the Atbara a few pools are scattered here and there. They owe their existence partly to the hollows that the eddies have excavated many yards below the normal bed, and partly to the trees that line the bank preventing the water from evaporating. In these pools, some more than half a mile in length, others reduced to an extent of a few square yards, are crowded together, in a space much too small for their mutual ease and safety, all the river fauna—fishes, turtles, crocodiles, and even the hippopotamus; the wild animals resort likewise to these pools teeming with life, and every palm and every thicket along the bank has its colony of birds. In most of the rivers on the plain the water brought back with the rainy season returns gently into its channel. Preceded by a current of air, which causes the foliage along its banks to thrill with life, it advances with a sound like the rustling of silk. The first sheet of water is a mere mass of yellowish foam mixed with *débris* of all sorts; following this mixture of mud and water comes a second wave, the true fluvial stream; then appears the normal current, towards which the animals rush to quench their thirst. But the powerful volume of the Atbara rushes on like an avalanche; when it again fills its bed, it is not by a slight and gradual advance, but by a sudden rush of water sweeping everything before it. The traveller sleeping on its sandy bed is suddenly awakened by the trembling of the earth, and by an approaching roar like that of thunder. “*El Bahr! el Bahr!*” shout the Arabs, and there is scarcely time to rush to the bank to escape the advancing flood, driving before it a mass of mud, and bearing on its first waves reeds, bamboos, and a thousand other spoils torn from its banks. Presently the river bed is completely flooded, a quarter of a mile broad, and from 18 to 40 feet deep, flowing on as calmly as if its current had never been ruffled. Like the Blue Nile, the Atbara, called also by the Arabs the *Bahr-el-Oswad*, or “Black River,” flows into the Nile, and running with it from cataract to cataract, sends down to the lower reaches that muddy sediment by which the fertility of the soil is ever renewed.

THE NUBIAN NILE.

Below the junction of the two Niles, north of Khartum, the river has no more visible affluents during the dry season, the lower bed of the Atbara itself being quite exhausted. But it probably receives hidden streams, for through evaporation, lateral filtrations, and the loss sustained in irrigating the riverain plains, the stream is diminished only by a seventh according to Lombardini, and by a fifth according to Gothberg, in the entire section of 1,620 miles between Khartum and Cairo. In the great bend that it describes in its course through Nubia it is diminished very slowly; but to the eyes of the traveller its volume does not appear to be modified during this long course over a considerable portion of the earth's circumference. As the Nile discharges a quantity of water equal to four times that of the Loire, or seven times that of the Seine, merchant vessels might penetrate through this highway to the centre of the continent, were it not obstructed at intervals by numerous rocky barriers. The Nubian Nile is thus divided by six natural barriers

into seven navigable reaches; nor can vessels pass from one to the other except at high water, or without the aid of hundreds of hands to haul them over the rapids or check their downward course. Were the waters of the Nile not retained by these obstructions, and were the stream allowed to flow freely during the dry season, the question may be asked whether there would be sufficient water for the whole year; would a delta have ever been developed or an Egypt created?

Preceded, between Tamaniat and the Jebel Melekhat, by two steep rapids and

Fig. 16.—CATARACT OF HANNEK.

Feble 1 : 80,000.

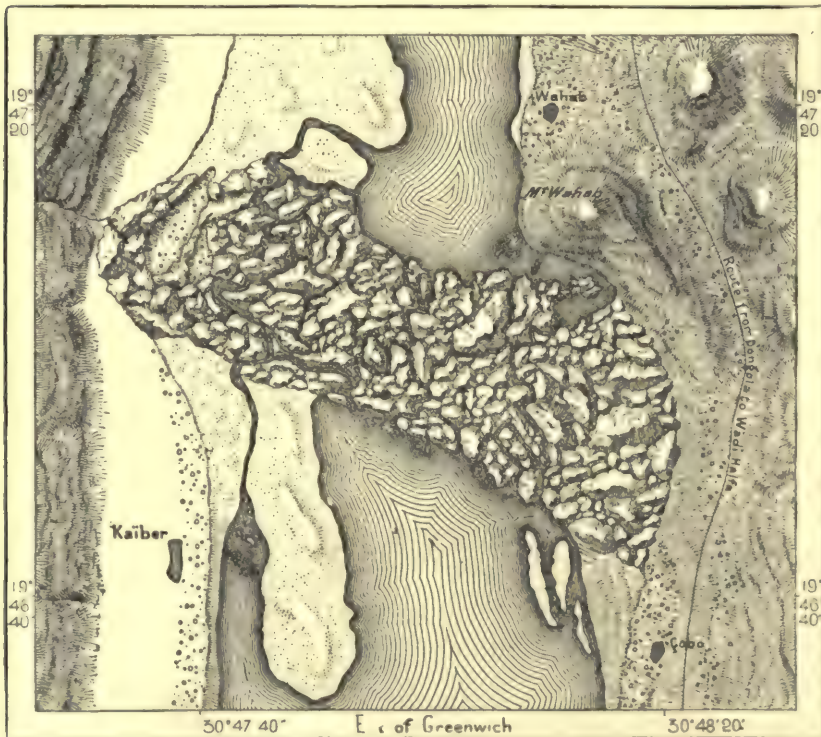


a gorge commanded by two basaltic columns, the sixth and most southern cataract between Khartum and the mouth of the Atbara would hardly be thought worthy of the name on such rivers as those of Canada and Scandinavia, where the still-undeveloped valleys have preserved their abrupt declivities notwithstanding the constant erosive action of the running waters. This cataract of Garri is rather a rapid caused by the presence of granite reefs at this point; still it suffices to interrupt the navigation for the greater part of the year. When the railway,

destined to become the commercial outlet of the whole Upper Nile basin, shall connect the Red Sea coast with the Atbara and Nile confluence, this line will have to be extended up stream as far as the cataract of Garri to allow of uninterrupted traffic. The fifth cataract, which is followed by the rapids of Gerasheb, Mograt, and others between Berber and Abu-Hamed, obstructs the navigation only at low water; but farther down occur more serious natural impediments. Most travellers crossing Nubia between Sudan and Egypt follow the land route from Abu-Hamed to Korosko, not merely because of the vast semicircle described westwards by the Nile in this part of its course, but also because its bed is here obstructed by three

Fig. 17.—KAIBAR CATARACT.

Scale 1 : 19,000.



1,650 Yards.

series of cataracts. One of these groups of rapids, known as the "fourth cataract," is of considerable length, and is divided into many stages like a series of sluices. First comes Dulga Island, a high rock crowned by a ruined fortress; then follow other granite boulders visible above the water, but without interrupting the navigation. This first barrier is succeeded by islands and sandbanks, followed by more rocks, dividing the river into steep channels, and the gorge ends near Gerendid, in a sort of gateway formed by two rocks covered with the ruins of fortresses. Here are no trees like those on the fifth or the third cataract situated below New Dongola, not a patch of verdure on the bank to soften the wild grandeur

of the scenery. Nothing meets the gaze except water, rock, sand, and sky, until it is arrested farther down by the bold headland of Mount Barkal.

The "third" cataract, like the others, comprises several partial falls, below an ancient island-studded lake, where the river expands to a width of some seven miles between its two banks. At the first granite reef, that of Hannek, so called from a Nubian castle on its left bank, the stream, divided into a thousand foaming channels, presents a more decided fall. Here blackish rocks of hornblende and feldspar project from twenty-four to twenty-six feet above low water. The rivercraft do not venture amid the openings of this irregular barrier; but under the right bank runs a channel broad enough to allow two boats to pass abreast. At the entrance of the cataract a few trees festooned with creepers overhang, in dense arches, reefs which are carefully avoided on account of the venomous snakes which infest them. Lower down more islands are scattered in mid-stream, their verdure contrasting vividly with the black rocks. The Hannek rapids have a total length of 4 miles, and the difference of level between the two extreme points varies from 18 feet at low water to 10 feet during the floods. It is thus evident that the fall is here comparatively slight, as is the case in most of the other cataracts.

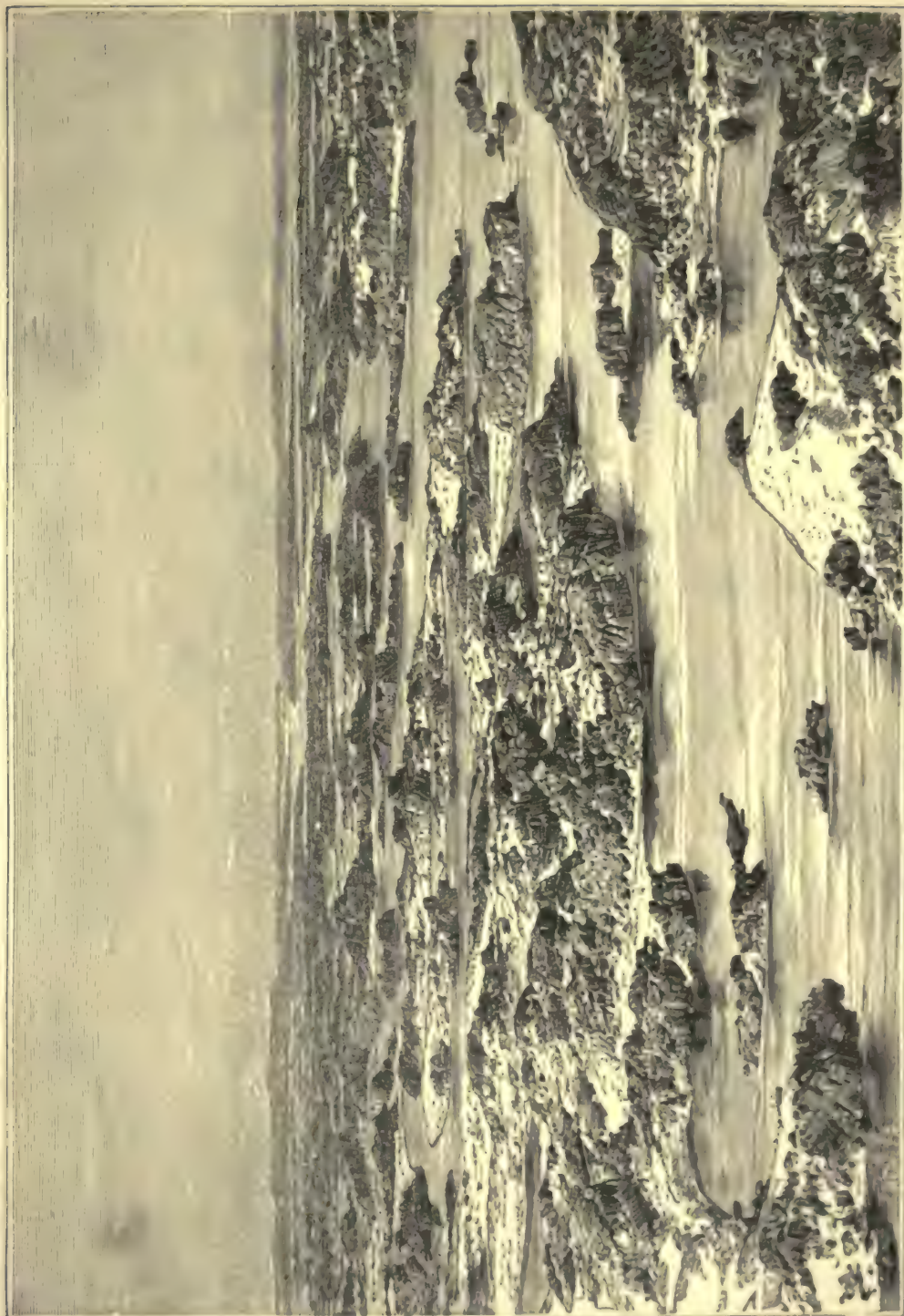
Below Hannek the Nile trends sharply east and north towards the Kaibar or Kajbar bank, which during the dry season seems to completely obstruct the stream. It has the appearance of an artificial dyke, which by a peculiar optical illusion, due to the contrast between the dark rock and the greyish water, seems to rise to a considerable height. The rock must be approached quite closely to find the tortuous outlets through which the foaming channels of the Nile escape. During the floods the Kaibar barrier is entirely concealed, leaving free passage to the stream between its banks. The Wadi-Halfa, or "second cataract," is the point where most European and American travellers making the "tour of the Nile" bring their journey to a close. The rock of Abu-Sir, which commands its tumultuous waters and affords a magnificent uninterrupted view of the southern horizon, is scrawled all over with the names of adventurous tourists, proud of having penetrated so far up the mysterious river. Although this cataract stretches over a space of more than fifteen miles, it forms merely the lower portion of the series of rapids known as the Batn-el-Hagar, which have a total length of about eighty miles. The river presents everywhere the same aspect throughout the whole of this section. Its broad bed is strewn with boulders, most of them rounded off like stones polished by glacial action; whilst others are disposed vertically like basalt columns, or else cut up into jagged crests, bristling with sharp and needle-like spines. Between these reefs rush the winding channels, each forming a separate cascade; elsewhere occur landlocked basins, in which the whirling waters seem completely arrested. To these succeed other rapids, falls, and eddies, the cataract thus breaking up into a thousand partial falls. But at low water these minute thread-like streams are scarcely visible, being lost in the vast maze of shoals and channels. Excluding the reefs, the archipelago consists of three hundred and fifty-three islands and islets, each with its Nubian name, more than fifty of them being inhabited and

cultivated. Farther north the right bank is skirted by a chaos of extinct volcanoes forming a continuation to the rocks of the cataract. Cones, craters, rugged crags, mounds of indurated ashes, hillocks of lava, stand out with their thousand varied forms against the horizon of the Libyan desert.

The "first" cataract, that of Asuan, is neither so long nor so uniform as that of Wadi-Halfa, nor does it present the same desolate appearance, but it none the less deserves the name bequeathed to us by the ancients. It also consists of a series of rapids endlessly ramifying amid the granite rocks of divers forms and colours, mostly destitute of vegetation, but offering here and there grand or charming pictures with their piled up rocks amid the foaming waters, and their picturesque groups of palms, tamarinds, or thickets festooned with lianas. The approaches of the cataract are guarded above by the island of Philæ, at once a temple and a garden; and below by Elephantine, the "Island of Flowers," whose beauties are mirrored in the waters of the stream. Their historical memories and associations also contribute to render the sight of these rapids one of those spectacles that challenge the attention of the observer in the highest degree, and that leave an indelible impression on the memory. Here is the "gate" of Egypt; here, since the commencement of recorded history, we trace, as it were, a visible boundary between two worlds. By a remarkable coincidence this boundary is almost indicated by the Tropic of Cancer, for it was close to Asuan that for the first time astronomers saw, at the summer solstice, the sundials deprived of their shadow and the wells pierced to the bottom by the solar rays. Another world began for them beyond this ideal line; it seemed to them as if in the torrid everything must contrast with the phenomena of the temperate zone. Even at the present day we are easily led to exaggerate all the local differences between the regions stretching on either side of the cataract and the populations inhabiting them.

At high water the navigation is not arrested along this so-called cataract. Boatmen pass with safety up and down; but at low water the passage either way on the thousand arms of "Neptune's vast staircase" is only to be accomplished by the aid of the "chellala," or "men of the cataract," who tow or check the boats by means of hawsers. About fifty large *dhababiyé*, engaged by the tourists, yearly brave the dangers of the falls, and thanks to the experienced pilots employed, accidents are rare. The skill of the boatmen in descending the cataracts displays itself in keeping the boat on the central crest formed by the stream, at times rising six or even more feet above the main body of water skirting the rocks; from the top of this moving hill the pilot commands the foaming rapids. The moment the boat swerves right or left from the crest of the wave the danger begins; if the sailors are unable to redirect it into the current by oar or rudder, it is inevitably dragged into the eddies at the sides and exposed to the rocks, compared by the Arabs to monsters who "bite" it to pieces as it is borne along.

At the sight of these rapids it may be asked, while allowing for the poetical exaggeration of the ancient descriptions, whether the obstructing reefs were not much higher two thousand years ago, and whether the Nile did not at that period form a veritable fall. In fact, it is probable that the river then fell in a cascade



THE NILE AT THE SECOND CATARACT.



over a lofty granite ledge. The desert east of the rapids is intersected by an old branch of the river running at several yards above the present high-water level. Even the most superficial observer of natural phenomena cannot fail to perceive that he is travelling in a now abandoned watercourse. He still perceives the windings of the stream between rocks covered with hieroglyphic inscriptions; he observes its old cliffs and banks, and here and there the alluvia are still revealed under the billows of sand drifting before the winds from the desert. The records deciphered by archæologists describe the march of armies along this old river bed, from the times of Thotmes and Rameses down to the present day. According to the observations made by Lepsius at Semne above the second cataract, it is probable that, from the beginning of Egyptian history, this dried-up channel was once flooded by a branch of the Nile. During the reign of Amenemha III., some 4,700 years ago, the watermarks engraved on the rocks at this place show that the flood level exceeded by many yards that of the present time: the highest water-mark exceeds by 25 feet, the lowest by 13 feet, the corresponding levels of modern days. On the right bank of the Hannek cataract also M. de Gottberg has found alluvial deposits 10 feet above the level of the highest modern floods. May not the waters have been thus arrested by the cataracts, and forced to flow into the now dried-up valley which serves as a highway between Egypt and Nubia? Above the Batn-el-Hagar rapids are to be seen many tracts formerly cultivated but now quite sterile, since the waters of the floods no longer reach them. Like all river valleys whose beds are regulated by the action of running waters, that of the Nile establishes its equilibrium by falling in Nubia and again rising in Lower Egypt. M. de Gottberg accounts for the lowering of the water-level in Nubia through the disappearance of cataracts formerly existing between Wadi-Halfa and Asuan, traces of which are still visible. The rocks forming these cataracts consist of schists, which, unlike the crystalline reefs, yielded to the destructive force of the stream. The granite rocks themselves also yield to the same action, but much more gradually.

THE LOWER NILE.

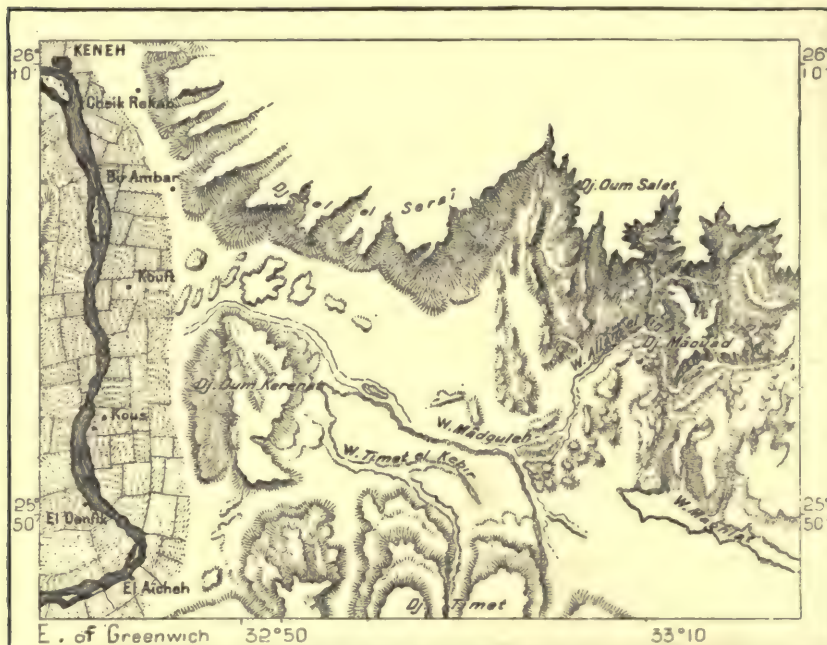
Below the granite ledge washed by the waters of the first cataract, the cliffs lining the river bank are composed of layers of sandstone, succeeded farther on by limestone rocks. Historic Egypt begins at the foot of this rocky barrier, which is covered on either side by tertiary deposits. North of Asuan the banks of the river are at first separated only by a space of from two to three miles. The fields and plants hemmed in between the escarpments and the stream present on either side nothing but a narrow strip of verdure winding along the foot of the grey or yellow rocks, which glitter like burnished gold in the sun. The cultivated zone lies chiefly to the west, along the so-called "Libyan" bank, which is most exposed to the solar rays. Like most other rivers of the northern hemisphere, the Nile bears chiefly towards its right bank, the current skirting the foot of the rocks, which at some points rise sheer above the stream. The towns stand mostly on the left bank,

although several left high and dry by the retreating waters have frequently had to shift their sites in order to maintain their communication with the river.

At the defile of Silsile, or the "Chain," where the valley, 4,000 feet across, appears to have formerly been barred by an iron chain, the landing-stages adjoin the old quarries which supplied blocks of stone and statues for the palaces of the Pharaohs. A sphinx's head is still to be seen here not yet detached from the rock. From this point the mountains begin to diverge on both sides, the river winding in a plain about 9 miles broad, the first below the cataract that affords sufficient space for the site of a large town. Here formerly stood Thebes of the hundred gates. Farther on the valley becomes wider, the distance from mountain to mountain varying from

Fig. 18.—THE KENEH VALLEY ON THE ROUTE TO KOSEIR.

Scale 1 : 650,000.



12 to 15 miles ; but in this part of its course, as well as above Thebes, the river bears chiefly towards its right bank, eroding the base of the cliffs of the Arabian range. On the left side the hills are mere sandy dunes shifting and modifying their form with every gust of wind. The cultivated tracts are here invaded by the Libyan desert, an extensive view of whose dreary wastes may be obtained from the crests of the western range.

Near Keneh, 36 miles below Thebes, the Nile describes that great curve which brings it nearest to the Red Sea. At this point it is distant from the coast, in a straight line, not more than 60 miles. Precisely in this direction the eastern range is broken by one of the deepest transverse ravines occurring throughout its whole course, and it may be asked whether, in some remote geological epoch, the Nile

may not have flowed through this breach towards the Red Sea. Beaches of rolled pebbles, which could only have been deposited by running waters, are found in this gorge both on the slope of the Nile and on that of the sea. It is probably these traces of a former channel that have suggested to the vivid imagination of the

Fig. 19.—HEAD OF THE IBRAHIMIEH CANAL.

Scale 1 : 425,000.



Arabs the idea that it would be easy to divert the Nile into its former bed, always supposing that this ravine did once receive the waters of the river. But if the course of the Nile cannot be deflected into this lateral gully, it would at least be easy to construct a railway through it, which would make the port of Koseir the

chief commercial outlet of all Upper Egypt. Over fifty years ago the English already sank wells at intervals along this gorge, with the view of utilising it for the overland route to India.

After flowing westwards below the great bend of Keneh, the Nile trends north-west and north; but in this part of its course it bifurcates, one arm branching off and flowing parallel with it on the west side at a mean distance of seven miles. This is the Bahr-Yusef, or "River of Joseph," so called in memory of Pharaoh's minister mentioned in the Jewish traditions, or rather of a certain Joseph, minister of the Fatimites in the twelfth century. But it does not appear to have been excavated by the hand of man, although it has been frequently embanked, deflected, and directed into lateral channels, like all the running waters of the valley. Recently the point of derivation has been displaced, and the canal named Ibrahimieh has been raised to the level of the high banks in order more easily to regulate the discharge of the flood waters. In the part where it has not been canalised the Bahr-Yusef, skirted along its left bank by the dunes drifting before the desert wind, is a winding stream like the Nile, having, like it, its islands, sand-banks, eroded cliffs, and network of watercourses and false rivers. Its mean breadth is about 330 feet, but through it very little of the Nile waters are distributed. Feeders from the main stream, in traversing the intermediate plain, replenish the River of Joseph at intervals, thus making good the losses caused by evaporation. This phenomenon, of two parallel streams in one and the same valley, one the main stream discharging nearly the whole liquid mass, the other a small current winding through an ancient river bed, recurs in nearly all those valleys whose hydrographic system has not yet been completely changed by canalisation and drainage works. Several rivers skirted by embankments have also their Bahr-Yusef, like the Nile. Such in France is the Loire, skirted by the Cisse, by the waters derived from the Cher, the Indre, and the Vienne; lastly by the river Authion, with its numerous ramifications.

THE FAYUM DEPRESSION.

About 300 miles from the point of bifurcation, the Bahr-Yusef penetrates into a lateral valley, where it ramifies in its turn. The eastern branch, which continues the river properly so-called, penetrates north-eastwards through a breach in the Libyan range, beyond which it rejoins the Nile above its delta. But the western branch trends abruptly north-westwards to a rocky gorge, at the entrance of which its course is regulated by a three-arched bridge built in the thirteenth century, and furnished with flood-gates allowing the stream to pass, or diverting it to the surrounding plains. Beyond the barrage the canal winds through a ravine about 6 miles long in the Libyan range, at the outlet of which it suddenly debouches in a valley of amphitheatral form, and nearly 110 miles in circumference. This is the Fayum depression, which is watered by an intricate system of canals, rills, and rivulets, ramifying like the veins and arteries in a living organism. At its lowest point this hill-encircled basin is estimated at from 86 to 116 feet

below the level of the Mediterranean. Although apparently quite flat, it has a sufficient incline for the waters of the canal derived from the Bahr-Yusef to circulate throughout the whole area, imparting to the Fayum a fertility rivalling that of the Nile delta itself. The superfluous water is collected towards the south in the small Lake Gara'a, or the "Hollow," whence it formerly penetrated far into the Wady Reyan. Towards the west the system of canalisation converges in a large lake about 30 miles long from south-west to north-east. This reservoir,

Fig. 20.—ENTRANCE OF THE FAYUM.

Scale 1 : 150,000.



known as the Birket-el-Kerun, is but slightly brackish, and quite drinkable by animals when it floods the whole western depression of the valley. But when reduced by evaporation it becomes saline, and the margin is then covered with crystalline efflorescences resembling snow at a distance. In some places the muddy ground, clothed like the Algerian *sebkhas* with a slight incrustation of salt, forms treacherous quagmires, dangerous to man and beast.

Till recently the superfluous waters were supposed to escape through a rocky gorge in the hills north of the Fayum Valley, to the depression known as the

Bahr-belâ-mâ, or "Waterless Sea." But this hypothesis has not been confirmed by the latest surveys, which have failed to discover any alluvial deposits indicating the presence of the stream at this point. The planks and masts of Nile boats spoken of by the Arabs are the stems of petrified trees, such as occur in various parts of the desert.

The Fayum, the Arsinoïtidis of the ancients, has been the scene of some of the most remarkable hydraulic operations of the old Egyptian engineers. Before the

Fig. 21.—FAYUM.

Scale 1 : 475,000.



.....
Ruins of the dyke of Lake Mœris.

————— 6 Miles.

interference of man the whole depression, which received all the waters of the Bahr-Yusef, formed an extensive inland sea. On this point tradition is unanimous, and in any case the continuous inflow must have flooded the cavity to a level sufficiently high to establish an equilibrium between the discharge and the loss by evaporation. The very name of Fayum (Piom, Phaïom), is said to mean "flooded land" in the old Egyptian language, although the Arabic word *fayyum* itself gives the appropriate sense of "corn-bearer." But after the Bahr-Yusef

was dammed at its entrance into the gorge, the "sea" became gradually reduced to a semicircular morass, and would dry up altogether but for the sluices which admit the water required for irrigation purposes. It was no slight matter to have thus reclaimed an extensive district, where as many as one hundred and fifty villages are said to have flourished. But according to the most probable supposition, supported by a careful survey of the whole region, the more elevated portion of the reclaimed land was converted into the famous Lake Mæris, which was one of the wonders of the old world, and which, centuries after its disappearance, must still be ranked amongst the most astounding works of man. The remains of embankments in some places 200 feet broad at their base, and 60 feet high, appear to represent on the east side the outer enclosures of the vast basin which during the floods received the discharge of the Bahr-Yusef, estimated at about the twenty-sixth part of the whole Nile. At the angles of the embankment are still visible the remains of pyramids recording the fame of Amenemha III., by whom this stupendous reservoir was created some forty-seven centuries before the opening of the Suez Canal. Herodotus, who may perhaps have seen though he did not measure it, gives it an enormous circumference, far greater in fact than that of the whole Fayum. According to Linant, it occupied an area of 120 square miles in the eastern portion of the Fayum, and at the end of the floods its volume must have exceeded 100,000,000 cubic feet. A small portion of this prodigious storage may have served to irrigate the western Fayum; but nearly all the overflow taken from the Nile during high water was distributed over the plains during the dry season, and sufficed to irrigate 450,000 acres of land. None of the great modern reservoirs can be compared with this great work, either for size or skilful design. Most of them are merely artificial lakes, which receive the whole fluvial discharge, and distribute the excess to the lower river basin. But the stream itself is continually sapping the foundations, and too often bursting the banks of its reservoir. It would, however, be difficult now to restore Lake Mæris, whose bed has been so greatly raised by alluvial deposits that the retaining walls and embankments would have to be carried several yards higher than formerly.

The Bahr-Yusef is continued under diverse names to the delta, but in its lower course the discharge is very slight. Nearly all its feeders, as well as the other channels and watercourses, are gathered up by the main stream at the head of the delta, whence they again ramify in a thousand branches over the plains of Lower Egypt. Hence at this point the Nile presents much the same appearance as in Nubia, or still higher up at the Khartum confluence. It glides in a slow and regular current between its banks, reflecting in its stream the trees, gray mud villages, and here and there a few white buildings. Nothing sudden or abrupt in this vast and sleeping landscape, whose monotony is broken only by a few *dhahabiyé*, or Nile boats, and above which is suspended an everlasting azure firmament. On either side the narrow plains, the cliffs, the ravines, and terraces succeed each other in endless uniformity. In this land of simple outlines, little surprise is caused even by the regular forms of the pyramids skirting the western

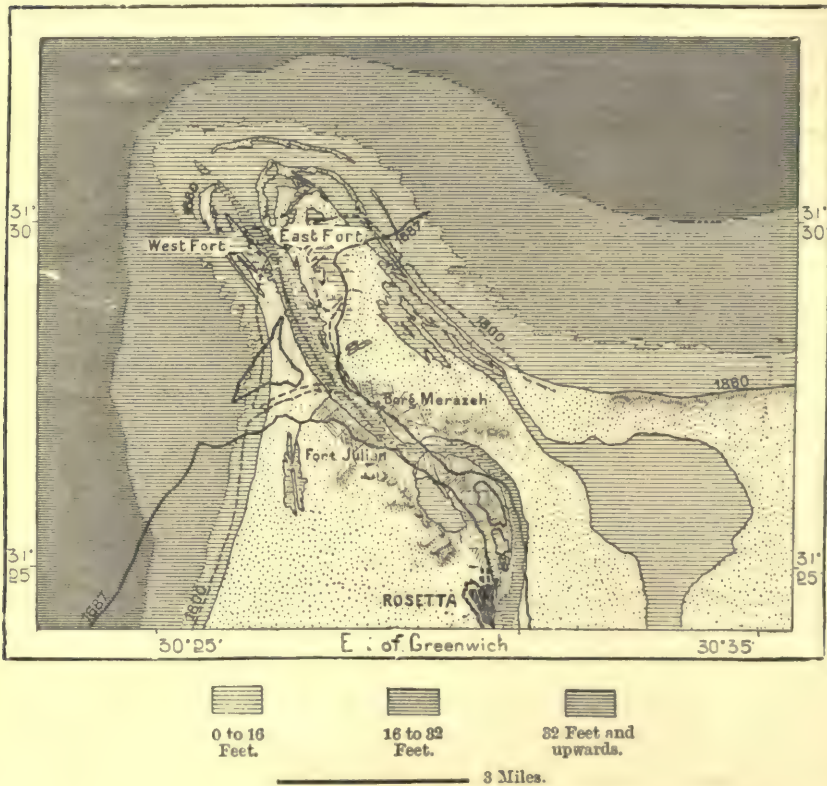
edge of the plateau, at dawn pink and hazy cones, like flames of fire dimly seen in the brighter sunshine, at sunset gloomy triangular masses standing out against a brazen sky.

THE NILE DELTA.

Below Cairo the two ranges of hills, confining the Nile as in a ditch, gradually retire as they merge in the plains, leaving the river to ramify and flow through divergent branches into the Mediterranean. The triangular disposition of this alluvial plain has caused the term *delta** to be applied to the whole region, and by

Fig. 22.—ROSETTA MOUTH.

Scale 1 : 200,000.



analogy to all districts of similar formation, however irregular their contours. Spite of all the changes that have taken place in the local geography since it was first described by Herodotus two thousand five hundred years ago, the Egyptian delta has remained a model of elegance in the harmony of its divergent branches and the indentations of its contours.

At the dawn of history the head of the delta lay more to the south, the bifurcation being situated some four miles below the present suburb of Bulak at Cairo. But the intermediate apex being unprotected by a system of embankments

* That is, the name of the triangular Gr ek letter Δ = D.

it yielded from year to year, from century to century, to the incessant action of the stream. The whole delta thus becomes displaced from south to north, according as the river beds are raised and the mouths extended seawards by the accumulation of alluvial deposits. At present the Batn-el-Bagara fork is over 12 miles from Cairo, following the windings of the island-studded stream, and has consequently been displaced at the annual rate of about 24 feet. Analogous changes have taken place throughout the whole of the delta, where the current has eaten its banks now to the right, now to the left, where simple channels have become broad watercourses, while copious streams have disappeared or shifted their beds.*

Under the influence of the mystic ideas prevalent regarding the value of numbers, the old writers unanimously agreed to reckon seven chief branches in the delta, all the others being regarded as "false mouths." At the same time the normal direction of the streams required for irrigation purposes was carefully maintained during peaceful epochs by incessant dredging, embankments, and works of canalisation. It is now, however, no longer possible to trace the course of the seven ancient branches, which, left to themselves, resumed their erratic tendencies, shifting their beds with every fresh inundation. But there is a general agreement regarding their main direction, and many doubtful points of the hydrology of the Nile as described by Herodotus and Strabo have been cleared up by the naturalists of the French expedition to Egypt at the close of the last century.

At present two main branches only are enumerated, and these are indicated on the convex curve of the seaboard by two points formed by the tongues of alluvial land advancing continually seawards. They are the Rashid or Rosetta branch, identified with the Bolbitinis of the ancients, and that of Damietta, which formerly bore the names of Phatnetica and Bucolica. The Rosetta branch, some 14 miles the shorter of the two, but flowing in a bed from 30 to 50 inches lower, carries off the largest quantity of water, leaving not more than four-ninths to that of Damietta and the intermediate Menufieh channel.* Nevertheless the Damietta River, thanks to its greater elevation, is much more available for irrigation purposes. The two branches, diverging like the radii of a circle, flow respectively north-west and north-east, advancing at their mouths some 5 miles beyond the normal coast-line. But, like all rivers falling into the Mediterranean, both are half closed by mud and sandbanks, barring the passage to large vessels. The western or Rosetta River has two channels from 7 to 8 feet deep, while that of Damietta, being less open, has a depth of scarcely 65 inches at its entrance. At high water, when there is a discharge of 470,000 cubic feet per second, the bar is reduced not more than 4 or 5 inches, its elevation depending more on the action

* Discharge of the Nile at low water in 1875, according to Ali Pasha Mubarek :—

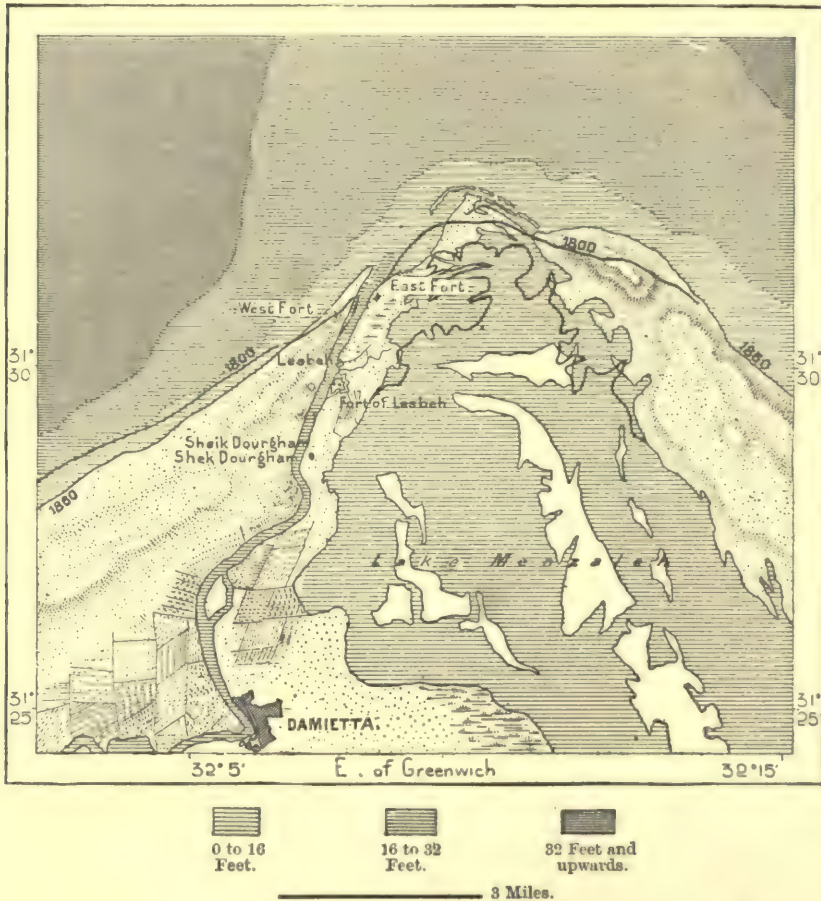
	Cubic feet.
Rosetta branch	6,370
Damietta „	8,560
Menufieh channel	670
Total	15,600
Mean	165,000

of the marine currents than on the inland floods. But if its height is little modified, its position is often shifted several miles. During the inundations the current of the Nile is felt 3 miles seawards, and at times is strong enough to perceptibly reduce the violence of the waves, thus offering a temporary refuge to storm-tossed vessels.

The face of the delta is gradually encroaching on the sea, but at a much slower rate than might be expected from the quantity of sedimentary matter brought

Fig. 23.—DAMIETTA MOUTH.

Scale 1 : 200,000.



down by the Nile. Even the estimate of 13 or 14 feet annually, as calculated by Elie de Beaumont on a study of the old and mediæval documents bearing on this point, seems to be excessive, slight though it be when compared with the growth of even smaller deltas, such as those of the Rhine and Po. The charts prepared by the French expedition at the end of the last century, and by M. Larousse in 1860, after the completion of the preliminary works for the Suez Canal, give a yearly increase of 130 feet for the Rosetta and 40 for the Damietta mouth. But these are merely local changes, and with the displacement of the channels the

accumulated alluvia are soon swept away and distributed along the coast by the marine currents. In many places these encroachments of the sea have been clearly determined. A distinctly perceptible coast stream sets steadily from Alexandria eastwards to Port Said, here and there developing slight local counter currents, such as the ebb and flow between the Rosetta mouth and Abukir Point. The effect of this stream is to erode the headlands and fill in the intervening inlets, thus restoring the original parabolic curve of the coast. Wherever an obstacle is met, it becomes attached to the mainland by a semicircular strip of sand. Shoals have thus been accumulated at the western pier of Port Said, although not in sufficient quantity to endanger the basins of the new port, especially as they may be easily reduced or removed by dredging. Altogether the annual growth of the delta cannot be estimated at more than 8 or 9 feet, so that since the time of Herodotus the mainland has encroached on the sea probably not much more than $3\frac{1}{2}$ miles.

There may even be a complete equilibrium between the fluvial deposits and the erosions of the marine currents. At least the geological aspect of the coast is that of an ancient seaboard forming a continuation of the small limestone ridge at Alexandria, which at present terminates at Abukir Point. In the shallow waters the waves take advantage of every rocky projection, islet, or headland to deposit sandbanks, and thus gradually transform the irregular marine inlets into landlocked lagoons. Before advancing beyond the mainland the Nile had to fill up these lagoons, separated by strips of sand from the Mediterranean, and this work is not yet accomplished. It would appear to have even been delayed by a general subsidence of the land, such as has been recorded in Holland, on the coast of North Germany, at the mouth of the Po, in the Amazon estuary, and in so many other alluvial districts. Thus the artificial caves formerly excavated near Alexandria at a certain elevation above sea-level are now submerged. These are the tombs known by the name of "Cleopatra's Baths."* To the same phenomenon should perhaps be attributed the restoration of certain depressions, which after having long remained dry have again been partly flooded.

But however this be, the lacustrine basins of the delta are now so shallow that they might easily be filled up. The eastern extremity of Lake Menzaleh, which is separated from the Nile basin by the embankments of the Suez Canal, has already become dry land, while the old bed of the Pelusium branch has disappeared. Since Andreossy's survey at the end of the last century, Menzaleh itself has been much reduced, and has now a mean depth of scarcely 40 inches, although covering a superficial area of about 500 square miles during the floods, when it communicates by temporary channels both with the Nile and the sea. At low water it is so beset with shoals and islets that most of the navigation is suspended.

Lake Burlos, which lies east of the Rosetta branch in the northern part of the delta, is scarcely less extensive than Menzaleh, and like it rises and falls with the periodical floods. A sweet-water basin when fed by the Nile, it becomes brackish at other times, and communicates through a single permanent opening with the

* Sir Ch. Lyell, "Antiquity of Man."

sea. Lake Mariut, close to Alexandria, has a circumference of at least 60 miles, and the steep cliffs towards the south and west give it the aspect of a true lake. Yet it was completely dry in 1799, when the English cut the embankment separating it from the sea. Since then it is once more diminishing, the breach having again been repaired. Whether the ancient Egyptians had also drained it by cutting off its seaward communications, or whether the mainland was then

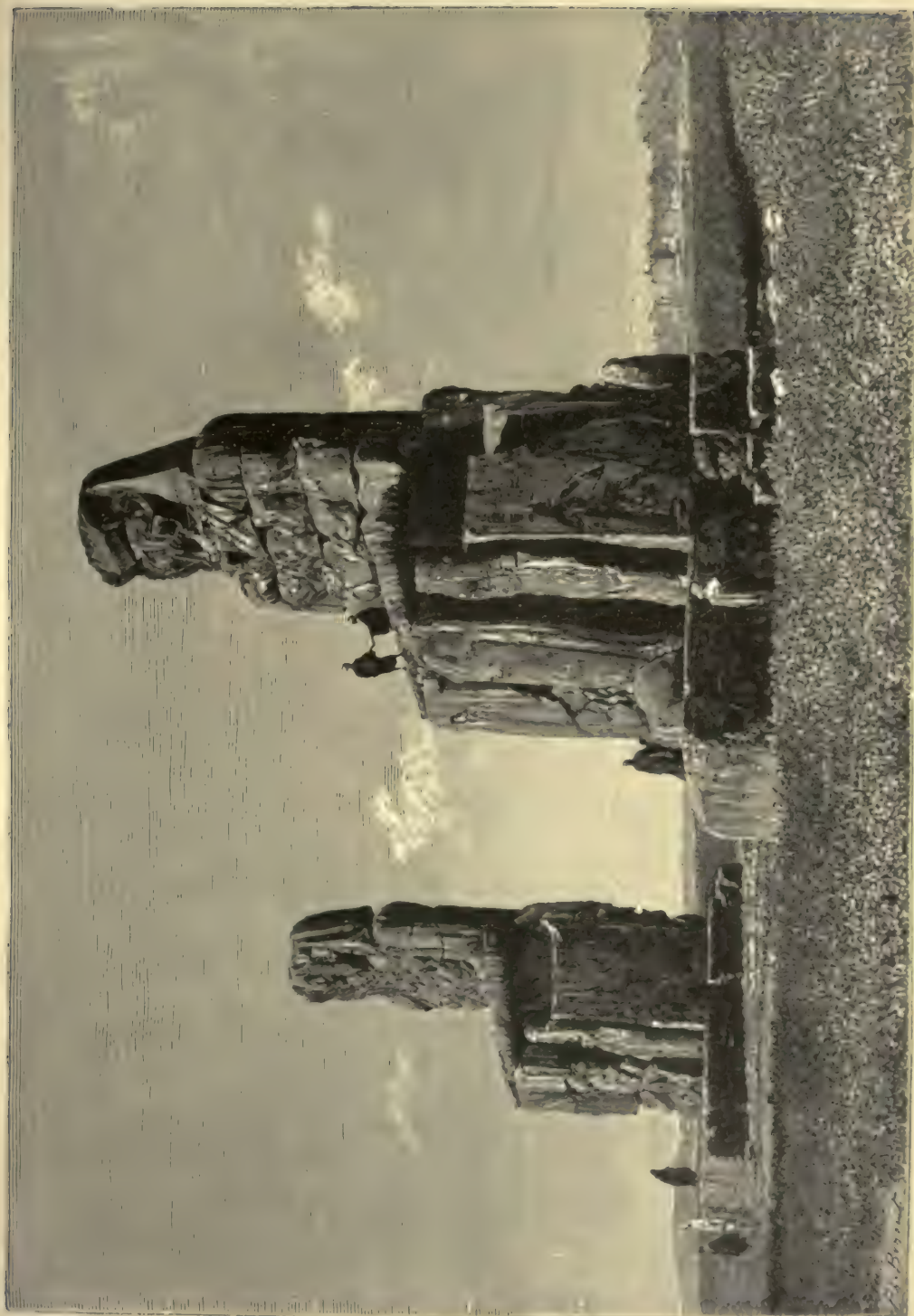
Fig. 24.—BRANCH OF THE NILE FLOWING TO LAKE MENZALEH.

Scale 1 : 360,000.



more elevated than at present, Mareotis was certainly either altogether or partly dry at some remote epoch, for in its bed remains are found of old temples and statues.

If it is difficult to estimate the encroachments of the Nile delta on the sea and the surrounding lakes, an equally intricate problem is presented by the gradual upheaval of the whole region subject to the annual inundations, for here account must also be taken of the sands brought by the wind, as well as of the sediment deposited by the stream. From the comparative observations made during the French expedition, Girard calculated that by the Nile alluvia the soil was raised on an average about 5 inches in a century. Hence, notwithstanding its slight encroachments seawards, the level of the delta would have been raised about 20 feet during the last five thousand years, that is, since the Egyptians had already



COLOSSAL STATUES OF MEMNON.



begun their great works of canalisation. Doubtless most of the monuments erected near the river, such as the slabs of stone paving the great avenue of sphinxes at Karnak, the colossal statues of Memnon, and even a block bearing a comparatively recent Greek inscription, are now found buried to some depth below the surface. But this is due not so much to change of level as to subsidence, such huge masses naturally sinking gradually in the alluvial soil of the riverain plains. In the same way the erratic boulders in Switzerland and the colonnades of the Roman temples have sunk more and more below the surrounding surface. The Nilometer discovered by Girard in Elephantine Island is perhaps one of those monuments whose foundations have thus given way. Hence although the present high-water mark may exceed the old measurement by 8 or 9 feet, it does not follow that the bed of the river and its banks have been raised to that extent. Such a phenomenon could not be reconciled with the drying up of the old bed east of Asuan, which has now been abandoned by the stream.

VOLUME AND PERIODICAL RISING OF THE NILE.

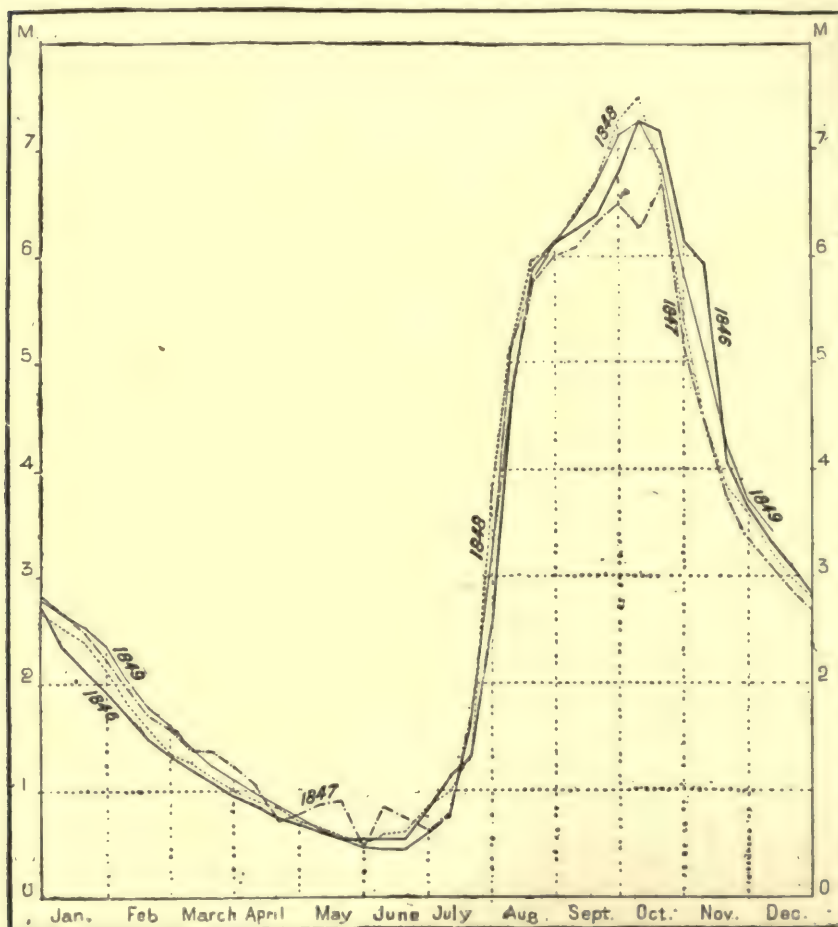
The yearly overflow of the Nile, which renews all nature, and which was celebrated by the Egyptians as the resurrection of a god, is of such regular occurrence that it was formerly compared with the revolutions of the heavenly orbs. How could the riverain populations refrain from worshipping this stream, "Creator of wheat and giver of barley," a stream but for which "the gods would fall prostrate and all men perish"? "Hail, O Nile!" sang the priests of old, "Hail, thou that comest to give life to Egypt!" According to its periodical return all things were and still are regulated—field operations, town work, civil and religious feasts. But at present it is easier to prepare for the rising waters, which are announced from Khartum thirty or forty days beforehand. They begin to appear nearly always on June 10th, at first "green" with vegetable refuse from the great lagoons of the upper basin. But the rise is very slight till about the middle of July, when the stream becomes suddenly swollen by the "red" waters from the Abyssinian highlands. Towards the end of August the Nile is nearly full, but continues to increase slightly till October 7th, when it usually reaches its culminating point. After this date the subsidence sets in and continues very gradually till the return of the floods the following June.

During the three months of high water the Nile sends seawards a liquid mass equal to about three-fourths of the whole annual discharge, or 3,150 billions cubic feet out of a total of 4,200 billions. High-water mark naturally diminishes down stream, falling from about 56 feet at Asuan to 24 or 25 at Cairo. Relying on some of the old texts, especially a much-disputed passage in Herodotus, some writers suppose that the level of the floods has been considerably modified since the first centuries of Egyptian history, although sufficient data are lacking to determine the point with certainty. In any case the mean elevation has undergone no change since the end of the eighteenth century of the new era. The careful measurements taken at that time have since been maintained, and they are

found to coincide with those published by the naturalists of the French expedition, and with the uninterrupted series of modern observations. At the same time the floods oscillate within certain extreme limits. Sometimes there is insufficient water to supply all the canals, while in other years the overflow is excessive, and on these occasions the land does not dry soon enough to insure good harvests.

The rate of the land-tax generally varies according to the height and volume of the river. Hence the public crier appointed to proclaim the state of the

Fig. 25.—YEARLY OSCILLATIONS OF THE NILE.



inundations has often been compelled by the Government to make false reports on this point. The day when the Nile reaches the proper level for cutting the dykes separating it from the irrigation canals is a day of rejoicing for all the riverain populations. Formerly a young maiden was on this occasion borne with great pomp to the river and cast into the seething waters, in order to obtain abundant crops from the local divinity. Now her place is taken by a dressed-up doll, which is still offered by the public executioner, a curious reminiscence of former human sacrifices.

The two zones of alluvial land skirting the Nile are intersected by numerous irrigation canals, which distribute the fecundating waters far and wide. Like those of other streams flowing through alluvial plains, the banks of the river are higher than the surrounding country. A cutting running transversely to the direction of the valley would show that from cliff to cliff the plain presents the form of a convex curve, so that at high water the stream occupies the most elevated level between the ranges of hills bordering both sides of its valley. From this central elevation the surface of the current inclines right and left, and the slope is continued in both directions across the riverain plains. This disposition of the ground is due to the greater quantity of sedimentary matter deposited along the banks of the stream. The waters have thus a double incline, that is, according to the general direction of the river valley, and according to the lateral slope of its banks. If they met with no obstacle in the irrigating canals, they would flow at once to the lowest level on either side, and convert the whole depression into a vast lake. Hence they have to be retained at the higher elevation by means of a transverse dyke, which is opened only when the upper levels have been sufficiently submerged. The overflow is then arrested in a second section also confined by embankment works, and in this way the water is distributed to every part of the surrounding plains by a system of canals disposed at successive levels.

Nevertheless the normal incline of the land has in many places been modified by the local alluvial deposits, and by the action of opposing currents in the lateral channels. The shifting sands brought by the winds from the neighbouring escarpments have also here and there raised the low-lying plains to a level with, and even higher than, the banks of the Nile, thus obliging the cultivators to change the whole plan of their irrigation works. Formerly, when the Nile was inhabited by five different species of the crocodile, the rising flood was preceded and heralded by the *suk*, a small and harmless variety, which was accordingly welcomed with much ceremony by the villagers, and even honoured with divine worship in many towns far removed from the Nile. Temples were dedicated to them, where they were kept alive, decked with armlets and pendants, and fed on the flesh of victims. But none of these saurians are now seen in the Egyptian Nile, even as high up as Thebes, although the canals intersecting Cairo were still infested by them at the beginning of the present century. None appear to be met below Omboi, south of Asuan, and this region of the cataracts is also inhabited by electric fish. But the hippopotamus has retreated still higher up to the neighbourhood of the Atbara confluence.

When the flood begins to subside, the water in the higher canals would at once flow back to the main stream were it not retained by sluices, and thus stored to meet the requirements of the following spring and summer. During the subsidence the level of the overflow is still maintained in the plains some 18 or 20 feet above the bed of the main stream. The peasantry also utilise the waters which filtrate laterally into the ground to a distance of some miles, but so slowly that the effect of the inundations is not felt for weeks and even months after the normal period of the rising. Even within 300 or 400 feet of the Nile the water in

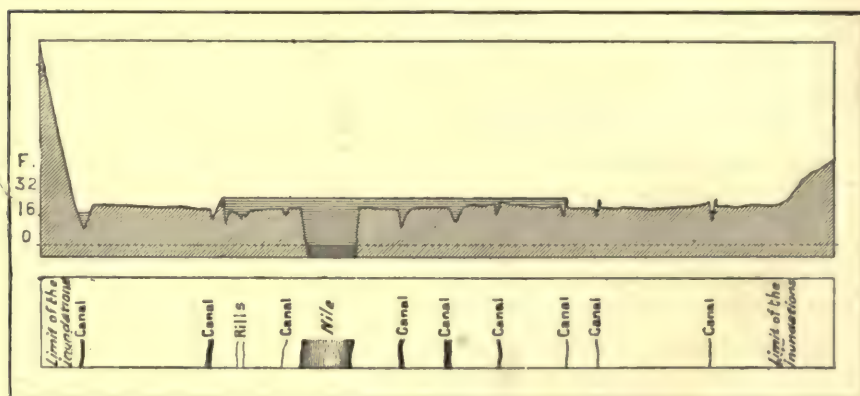


the wells does not begin to rise for eight or ten days, while at the distance of half a mile it is delayed till the floods are actually subsiding. Hence the curious phenomenon that, when the Nile is at its lowest ebb, the water in wells at a distance from the stream rises some 10 or 12 feet higher than the river itself. The cultivators are thus enabled to continue the work of irrigation, which would otherwise be impossible.

The canals and transverse ditches utilised as a means of communication between the villages cut up all the cultivated lands into a vast "chessboard," whose parting lines are, so to say, alternately raised and sunk below the surface. The vivifying fluid circulates everywhere, like blood in the animal arterial system. But the maintenance of this intricate organism involves enormous care, the least disorder in these almost level plains often sufficing to cause crevasses and obstructions, and converting the flowing streams into stagnant waters. Worn out by ceaseless toil,

Fig. 26.—SECTION OF THE NILE VALLEY AT SÎÛT.

Scale 1 : 100,000.



— 3,300 Yards.

harassed and disheartened by official rapacity, the fellahin sometimes lack the energy required to keep in good order the canals that are indispensable to feed the primitive appliances for irrigating their fields. On the large estates the water is raised by means of the *sakiyeh*, a system of revolving buckets like those of Syria, worked in Egypt by oxen and asses, in Nubia by camels. But most of the peasantry make use of the so-called *shadûfs*, vessels or baskets attached to both ends of a balanced lever, and by two men lowered and raised alternately, and discharging their contents into a distributing rill. A *shadûf* will thus raise the water to a height of 8 or 10 feet, a second and even a third contrivance of the same kind successively carrying it to the highest required level. But very little of the water that might be obtained for irrigation purposes is secured by this rudimentary apparatus. Of the 4,200 billions of cubic feet yearly discharged by the Nile, not more than 175 billions are thus utilised by the riverain populations, so that not more than half, or perhaps a third, of the arable land is brought under cultivation. Scarcely forty



BANKS OF THE NILE—THE SHADUF.



millions of people dwell in the Nile basin, which might yield corn sufficient for a vastly larger population.

The brown or blackish mud of the Nile is the only manure required for the crops. In the sun it becomes solid and may be cut into bricks or vessels; under the foot it is hard as stone, and in shrinking develops deep fissures in the ground. The old sandy or calcareous deposits, mingled at the foot of the hills with the rolled shingle washed down by floods anterior to the present geological epoch, are covered with a layer from 35 to 40 feet thick, forming an extremely rich arable soil which, if removed elsewhere, might suffice to fertilise a region a hundred times more extensive.

In its chemical composition this Nile mud, from which Egypt has been created, differs from that of all European rivers. Its analysis yields the most varied results according to its age, locality, and distance from the river. But it always contains a considerable proportion of carbonates of lime and magnesia, of oxide of iron and carbon, derived from decomposed organic substances. Palatable as it is, the Nile water nevertheless contains the refuse of all the provinces in its vast basin—the slime of the Atbara, animal remains from the Bahr-el-Azraq lagoons, sedge and other vegetable débris from the Kir and Gazelle rivers. Between the sands, argillaceous clays, and rugged crags of both deserts there thus intervenes a narrow belt of verdure created by the miscellaneous sedimentary matter in the course of ages washed down from half the continent.*

* Analysis of the Nile mud in Egypt, by Regnault, "Description of Egypt," vol. xx.

Water	11 per cent.	Carbonate of Magnesia	4 per cent.
Carbon	9 " "	Carbonate of Lime	18 " "
Oxides	6 " "	Alumina	48 " "
Silica	4 " "		





CHAPTER III.

REGION OF THE GREAT LAKES.



THE basin of the Victoria Nyanza, including that of the Upper Nile as far as its passage across the Albert Nyanza (M'wutan Nzigeh), comprises a superficial area which may be estimated at some 170,000 square miles, although this estimate cannot claim to be more than a very rough approximation to the reality. Pending a more exact knowledge of the parting lines between the great river basins, we must be satisfied with rude calculations according to the spaces enclosed in the meshes of the intersecting lines of latitude and longitude. This vast region, which has a mean altitude of over 4,000 feet, forms part of the great continental divide. The waters it sends down to the Egyptian river bring it within the Mediterranean basin; but it approaches far nearer to the Atlantic seaboard, while its southern extremity lies within 240 miles of the Indian Ocean. As regards its facilities of communication with the outer world, the Victoria Nyanza naturally gravitates towards the social and commercial system of which Zanzibar is the centre. Even after the water highway of the Nile is again opened, and intestine warfare has ceased to harass the riverain communities, European explorers will find it most convenient still to take the route, ascending from the Indian Ocean to the plateaux, which has ever been followed by the Arab traders.

Although forming the water-parting between the Mediterranean, Indian, and Atlantic basins, the Nyanza region is far less elevated than some other parts of the continent. Except towards the sources of the Tanguré, where Mfumbiro rises to a height of probably 10,000 feet, and farther north, where the still loftier Gambaragara stretches parallel with the meridian, the plateau nowhere develops elevated highlands. The plains are broken only by hills and ridges rising a few hundred yards above the normal level, and presenting no insurmountable obstacles to the exploration of the interior. Amongst these Upper Nilotic lands those especially bordering the northern and western shores of Nyanza are almost unrivalled in Africa, and scarcely elsewhere surpassed, for the charm and variety of their scenery, their abundant waters, exuberant vegetation, and fertile soil. The inhabitants of U-Nyamezi, south of the lake, are less favoured in these respects. Here hill and

dale alternate with the plateaux; but during the rainy season the land is mostly flooded or changed to a swamp. All the villages and cultivated tracts have had to be distributed over the uplands, the intervening valleys being utilised only as grazing lands during the dry season. The hills consist of granites clothed here and there with a thin layer of vegetable humus, sufficient to support a little brush-wood.

East of the inland sea the soil, being less copiously watered, is strewn with brackish or saline depressions, while farther north a large space between the Victoria and Albert lakes is occupied by fresh water morasses, thickets of the nenuphar plant, sluggish streams flowing in broad winding beds.

CLIMATE—FLORA—FAUNA.

Although the Victoria Nyanza is intersected by the equator, the normal heats are tempered by the elevation of the land, by the free passage it offers to every atmospheric current, and by the arborescent vegetation fostered by the tropical rains. Hence the high temperatures prevalent in Nubia, twenty degrees north of the equator, are unknown in this favoured region. Systematic observations made at Rubaga, capital of U-Ganda, just north of the line, show that the epithet of "torrid" is inapplicable to the climate of these countries. The glass never rose above 95° F. or fell below 51°, the mean between these extremes being about 79° for the whole year. This is the temperature of Canton, Tunis, and New Orleans, and is much lower than that of Cairo, Bagdad, Havana, Rio de Janeiro, not to speak of such sultry places as Bushir, Mascat, Karachi, Bistra, or Murzuk, &c.

The prevailing winds are from the south and south-east, attracted by the rarefied air of the Sahara. Storms, which nearly always take place about the same hour in the afternoon, are generally the result of a collision between these southern currents and others from the north and north-west. In this region, which corresponds with that of the "Black Cauldron" in the Atlantic, heavy rains prevail throughout the year, except perhaps in July, which is a comparatively dry month. The greatest downpours are in September, October, and November, and again in April, although according to Wilson the mean annual rainfall does not exceed 50 inches in U-Ganda, where there are no lofty ranges to intercept the moisture-charged clouds. The months are here marked by no transitions of heat and cold, and as the rainy seasons of autumn and spring are the most conspicuous phenomena of the solar year, the people of U-Ganda have taken as the natural divisions of time these epochs, which also coincide with their agricultural divisions. Hence their years are only half the length of ours, each consisting of six months, the first of which is called the "sowing month," the five others the "eating months."

Favoured by an abundant rainfall, the flora is very rich in the fertile regions encircling Lake Victoria, where the soil consists of vegetable humus resting on a red clay mixed with sand some 35 feet thick. In U-Ganda about the equator there is no break in the verdure which everywhere clothes the land. The banana and other plantations, forming extensive gardens in which the villages are embowered

in foliage, are succeeded by forest trees laden with parasitic plants and interlaced by festoons of huge creepers with the dense undergrowth. The brooks winding along the lowlands seem to flow in underground channels impenetrable to the solar rays.

But however beautiful the flora of the upland plateaux, it does not appear to be distinguished by great variety. Of the seven hundred and fifty species collected by Grant between Zanzibar and the lower Nile, eighty, or at most a hundred, were new to botanists. The floras of the Cape, of Abyssinia and the Nile are intermingled on these uplands, where even some Indian species occur, and to these have recently been added a number of European plants which here find a congenial home. Grant thinks that Karagwé especially would be admirably suited for the cultivation of the tea plant. The giant of these forests is the *mpaffu*, which distils an aromatic gum from its enormous trunk 24 to 26 feet in girth.

Like the flora, the fauna of the plateaux is distinguished from that of the surrounding regions by but few indigenous species. The lake is inhabited, like the Nile and the Niger, by hippopotami and crocodiles, while multitudes of aquatic fowl swarm in the sedge or perch on the branches of the trees fringing its shores. From the cultivated tracts most wild beasts have been scared, although the neighbouring thickets are still infested by the much-dreaded panther. Hyænas also prowl about the villages; the wayfarer is often startled by the ill-omened yelp of the fox; small game is hunted by the wild cat and other allied species; squirrels spring from branch to branch of the forest trees, above which hover greyish parrots noted for their large size and shrill voice; lower down the flowery mead is alive with all the brilliant world of smaller birds and butterflies.

The wilder districts of U-Sui on the Karagwé frontier and of North U-Ganda, where forest trees and cereals are replaced by the wild palm and ferns, are inhabited by numerous species of the antelope, by the rhinoceros, elephant, and zebra. Here also the swampy lands are peopled by the buffalo, while the wild boar finds a lair in the dense brushwood. Several varieties of monkeys enliven the forests of the tableland, amongst them the *colubus guereza*, noted for its rich white and black hair, and possibly also the chimpanzee.* The lion is very rare on the equatorial uplands, although his tremendous roar is occasionally heard, striking terror into the other denizens of the forest. Ostriches sweep over the open plains; guinea-fowl in countless numbers find a shelter in the bush, and the victims of the battlefield or the executioner are removed by a small species of vulture, the scavenger of so many tropical lands.

INHABITANTS.—THE BANTUS.

Certain parts of the Upper Nile region are amongst the most densely peopled lands in Africa. The descriptions of Speke and Grant, of Stanley, Long, De Linant, and Gessi, as well as the partial estimates of the missionaries, are all unanimous on this point. According to these witnesses, some ten or twelve millions of souls are

* Emin-Bey, Petermann's "Mittheilungen," 1881.

concentrated in the districts bordering on the great lakes, which are drained by the headstreams of the Nile.

In speech, and probably also in origin, the tribes and nations of the plateau are allied to the peoples of South Africa, whose ethnological domain encroaches at this point some 600 miles on the northern basin. All the lacustrine communities belong to this Bantu stock, which is so remarkable for its harmonious and pliant speech. East of the Victoria Nyanza, however, there appear to dwell certain tribes speaking idioms akin to that of the Kordofan Nubas; at least, it is certain that the Masai and the Wa-Kwafi, whose language is not of Bantu origin, have some settlements in the neighbourhood of the lake. Amongst these lacustrine tribes there are some that have not yet been visited by European explorers. Pending more positive information, which cannot be much longer delayed, all these tribes have been provisionally classed with the Bantu family.

THE WA-SUKUMA AND WA-ZINZA.

A section of the Wa-Nyamezi group of tribes has occupied the hilly district stretching south of the Speke Gulf, the largest inlet of Lake Nyanza. But no large state has been developed in this region, which is watered by the Simeyu and other streams flowing to the gulf. The inhabitants, collectively known as Wa-Sukuma, are divided into a large number of small communities of Bantu origin, but greatly modified by mixture with slaves from all quarters, and frequently displaced to escape the attacks of the *ruga-ruga*, or marauders. Most of these Wa-Sukuma tribes, although banded together in a sort of confederation, are distinguished from each other by their systems of tattooing and by the way the front teeth are filed down. Their chief ornament consists of iron wire wound round the arms, legs, and neck, rendering quick action very difficult. Both sexes also attach little bells to their legs, the tinkling of which acts as an accompaniment to their conversation. The tribal chiefs enjoy theoretically very little power, and are required on all important occasions to consult the elders, the real depositaries of the national usages and traditions. Nevertheless the personal wealth acquired by these kinglets, constituting them the great proprietors of the country, often enables them to play the part of irresponsible despots. When the villagers brew their *pombé* or native beer, the king drinks and gets drunk at pleasure; when the hunters slay an elephant he claims the best "joints," and appropriates the tusks; all the skins of lions, leopards, and zebras in the same way fall to his share. The itinerant dealer must show his wares to the king, who imposes a road-tax, fixed according to his caprice. Lastly, the tribal chief inherits the property of all his subjects who suffer capital punishment on the charge of sorcery.

Although the women generally speaking enjoy very little respect, the populous village of Wama is governed by a queen. The magicians command great influence, and whenever any of their prophecies happen to come true, or their miracles prove successful, they dispose of the unlimited authority usually accorded to infallibility. Their "divining wand" is a cow's or antelope's horn, which when filled with a

war drums. Beyond the first enclosure is the court of justice, where the king, seated on a throne decorated with teeth, talons, and horns, settles the disputes of his subjects. A second palisade, less substantial than that of the royal palace, encircles the whole village, with its huts, winding lanes, and cultivated fields, where are cultivated tobacco, cereals, and various vegetables introduced by the Arabs.

The south-east side of Lake Victoria is bordered by the U-Zinza (U-Zinja) country lying west of the Isanga River, which flows to a narrow fiord penetrating over 30 miles inland. This little-known region has been visited by Europeans only on its southern slope, which drains to Lake Tanganyka. Like the Wa-Sukuma, the Wa-Zinza are divided into several communities governed by chiefs and their wizards. They live in constant dread of the marauding Wa-Tuta tribe, who are said to be southern Bantus, perhaps Zulus penetrating from Lake Nyassa through the Tanganyka basin northwards, plundering and massacring along the route, like a horde of wild beasts. The Wa-Zinza of the hilly sandstone districts in the north, who have less to fear from hostile inroads, are a finer and more vigorous race than those of the lowlands. They wear a skirt of tanned ox-hide, deck themselves with necklaces and amulets, and lard their bodies with rancid butter. Of all the Wa-Zinza tribes, the Wa-Sui branch is the most powerful.

THE WA-HUMA.

In these regions the chief power belongs to families of the Wa-Huma, a race of pastors which is represented by one or more communities on all the upland plateaux round about Lake Victoria. According to Speke and Grant, these Wa-Huma are conquerors of Galla stock, originally from the Ethiopian highlands. In U-Nyamezi, and as far as the seventh degree of south latitude, kindred tribes are found, here known as Wa-Tusi, who closely resemble the Wa-Huma in speech and usages. They are distinguished from their agricultural neighbours by a loftier figure and more regular features, oval face, straight and well-chiselled nose, and small mouth, without the pouting lips characteristic of the true Negro. The Wa-Huma women best represent this fine Ethiopian type; hence they are readily purchased by the chiefs of other races for their harems. But while all the surrounding peoples become gradually modified by these crossings, the Wa-Huma preserve their original purity, keeping aloof from all contact with the aborigines. They are nearly all stock-breeders, and as they mostly live in the jungle, far from villages, they are seldom met by travellers. Although they have given kings to most of the upland tribes, they are nevertheless regarded as barbarians by the Negro cultivators, just as in the "Middle Kingdom" the Manchu conquerors are despised by their Chinese subjects. But in the midst of all these enslaved communities, who vaunt their industrial arts and agricultural pursuits, the Wa-Huma have at least the superiority acquired from a free and independent life. They tolerate no masters, and those amongst them who have failed to defend their liberties are no longer regarded as belonging to their nation. Speke even tells us that captured and enslaved

Wa-Huma women are burnt alive whenever they again fall into the hands of their fellow-countrymen. The language of the Wa-Huma is unknown, and it is still uncertain whether they speak a Galla dialect mixed with Bantu words or a Bantu idiom affected by Galla elements.

THE KINGDOM OF KARAGWÉ.

The kingdom of Karagwé occupies west of Lake Victoria an area of about 6,000 square miles, being limited southwards by U-Zinza, west and north by the Tanguré

Fig. 29.—KARAGWÉ.

Scale 1 : 1,500,000.



river, which seems to have the best claim to be regarded as the Upper Nile. From U-Sui this state is separated by a desert borderland watered by the Lohugati, which flows north-east to Lake Nyanza.

Karagwé is one of the finest countries in Central Africa. With its evergreen hills, fertile valleys, and purling brooks, the whole region presents a park-like appearance, and might easily be transformed to a vast garden. The western district is tolerably elevated, the crests of the plateau here attaining a height of 5,000 and even 6,000 feet, and in clear weather commanding a view of the blue

Mfumbiro peaks, and of other distant summits, named by Speke the "Mountains of the Moon." On the Karagwé uplands the air is so cool that the natives of Zanzibar fancy that they must be in the neighbourhood of England, the only cold country known to them by repute. In some of the depressions lakes have been formed, amongst others the lovely Raveru (4,300 feet), which to Speke and Grant seemed beautiful enough to merit the title of the African "Windermere." But although encircled by grassy slopes rising 1,500 or 1,600 feet above its waters, it is not an Alpine lake, its depth nowhere exceeding 45 or 46 feet. The Urigi, another basin near the southern frontier, is merely a large pond, discharging its overflow northwards to the Tangurú. According to the natives the whole valley was, even in recent times, still under water. Boats were able to ascend from Nyanza to Urigi, and the little dome-shaped hillocks dotted over the plain were then rocky islets. These hills consist of argillaceous sandstones of a bright red colour, interspersed with large masses of white quartz. The decomposition of the sandstones, the prevailing formation throughout the whole region, supplies the fertile red soil on which such bountiful crops are raised. At the head of a shady valley in the north-west spring the six thermal streams of M'tagata, which have a temperature of 130° Fahr. They are resorted to by all the surrounding populations, who have much faith in their curative properties.

Except in some districts, such as that of the capital, near Windermere, Karagwé is rather thinly peopled. The majority of the inhabitants belong to the Wa-Nyambo stock, and speak the Zongora, a Bantu dialect. But here also the chief power has been usurped by the Wa-Huma, whose daughters are not permitted to contract alliances with Negroes of lower castes. The lives of the Wa-Huma are held to be sacred; hence they are absolutely exempt from capital punishment, all crimes, murder not excepted, being punished by fines alone. We know that in many parts of Africa the women are systematically fattened, to such an extent as to be no longer able to stand up. This excessive obesity is regarded as a supreme virtue, doubtless because it proves the wealth of people who can thus afford to nourish their wives and exempt them from manual labour. For an analogous reason many Karagwé chiefs allow their nails to grow, like the Annamese mandarins, to show that they have no need of their hands, slaves working and toiling for them. On certain occasions human sacrifices are also still practised. At the death of the sovereign a "mortuary chapel" is built over the body, into which are thrown five girls and fifty cows, destined to accompany their master on his long journey to spirit-land.

Warahanjé, capital of Karagwé, is pleasantly situated, over 4,300 feet above the sea, on a grassy terrace overlooking Lake Windermere, and commanding a view of a steep hill, on which stands the royal necropolis. Farther on winds the valley of the Alexandra Nile, a vast forest of papyrus bounded on the distant horizon by the triple-crested Mfumbiro. At the eastern foot of an intervening cone the Arab traders have established the station of *Kufro* (Kafuro), where woven goods, salt, and European wares are bartered for ivory, coffee, and other native produce. In this district elephants have already begun to disappear, although a huge species of

white or greyish rhinoceros still abounds. West and north of Karagwé the large mammals have not yet been disturbed either by Europeans or Arabs, these somewhat inaccessible regions having hitherto remained unvisited by explorers.

THE RUANDA COUNTRY.

Ruanda, lying directly west of the Tanguré river, and stretching away as far as the northern slope of Lake Tanganyka, is probably the most powerful state in this still unexplored region. According to the statements of the Arabs, who have vainly endeavoured to penetrate into the country, whence they would be promptly expelled, because "famine and drought follow in their train," here are some very large villages, and the land is said to abound in minerals and hot springs. South of Mount Mfumbiro all the slopes seem to be covered by an immense forest of useful timbers. Northwards M'poro and U-Sagara, also called Ankori or Mkolé, are also said to be rich in valuable products. Most extraordinary things are related of this mysterious country, wicked dwarfs, far more formidable than giants, taking a prominent part in all these reports. It is probable that a race of pigmies, like the Akka of the forests of the river Welle, and the Obongo of the Ogoway basin, occupy the upland valleys of Mount M'fumbiro and the ranges running northwards towards Mounts Kibanga and Gambaragara. Stanley states that the king of U-Ganda sent an expedition against these dwarfs, but the cold seems to have prevented his soldiers from penetrating into the upland valleys. Here also the chief power appears to be in the hands of the Wa-Huma, these conquerors from the east having thus apparently reached the water-parting between the Nile and Congo basins. This still unexplored country will doubtless sooner or later occupy a position in the history of the continent analogous to that which it already holds in its geographical aspect. Thanks to its climate and productions, it may become a new Europe in the very heart of Africa, and here will be the principal health-resort of the Nile and Congo lowland regions.

THE EMPIRE OF U-GANDA.

The kingdom of U-Ganda,* the best known of all the states on the plateau of the Nile basin, seems to be also the most populous, as it certainly is the most powerful. Its form is that of a crescent, stretching west and north of the Nyanza, and comprising Koki, U-Du (Uddu), and other states, as far as the mouth of the Alexandra Nile. Eastwards it extends even beyond the Somerset Nile, having gradually absorbed the U-Soga country. It also possesses the large Sesse Archipelago, besides several other islands. In the interior its still undefined limits are lost in dense uninhabited jungles, and quite recently it has claimed sovereignty over Karagwé and U-Sui. Its total area may be estimated at 20,000 square miles, and, including the dependencies, at about 70,000 square miles. Stanley's calculations, based on the number of armed men, make the population about 2,775,000.

* *U-Ganda* means country of Ganda; *M-Ganda*, man of Ganda; *Wa-Ganda*, people of Ganda; *Ki-Ganda*, language of Ganda.

But according to the English missionaries it really amounts to 5,000,000, that is to say, nearly 200 persons per mile, a density almost one-fourth more than that of France. However, a still more remarkable statement of Messrs. Felkin and Wilson throws some doubt upon the value of these provisional estimates. According to them, the women are three and a-half times more numerous than the men, a social phenomenon elsewhere without parallel. Hitherto all the regular statistics have shown that the sexes are nearly equal, either with a slight overplus for the women, as in all the countries of Europe and the New World, or with a small excess for the men, as in Japan. English travellers seem to think that this extraordinary disproportion may be due at once to natural and political causes. The births of girls far exceeds those of boys, as is evident from the groups of children playing before the huts, the dangers of the battlefield and the massacres of the captives accounting for the rest. On their successful expeditions the Wa-Ganda warriors, like their neighbours, kill the men and carry off the women, who are afterwards divided amongst the conquerors.

In U-Ganda, as in most of the other states of the plateau, the power belongs to the Wa-Huma nation, although the majority of the inhabitants are the Wa-Ganda, who have given their name to the state. They are true Negroes, with almost black complexion and short woolly hair, above the average height, and endowed with uncommon muscular strength. The women are distinguished by their small hands and feet. The Wa-Nyambo, who come from Karagwé and the adjacent provinces, and who are for the most part pastors, are more slender in appearance than the natives. But the Wa-Soga, immigrants from the countries situated to the east of the Somerset Nile, equal the Wa-Ganda in stature and in strength, while they are even of a darker complexion. Amongst these various peoples albinos are very numerous; nevertheless they are exhibited as curiosities in the huts of the chiefs. The practices of tattooing the face, distending the lobe of the ear, or filing the teeth to a point, common amongst other African tribes, are here unknown, all voluntary mutilation being forbidden under pain of death. Nor do the Wa-Ganda grease the body with fat, and they are in other respects of cleanly habits and given to frequent ablutions. The most dreaded disease is small-pox, probably imported from the eastern coast. It spares few persons when it presents itself in an epidemic form. A few scattered cases of leprosy are to be found here and there, persons frequently being seen with their black skins covered with white blotches, like those of the Mexican Pintados.

HABITS AND CUSTOMS OF THE WA-GANDA.

The chief food of the Wa-Ganda is the banana, of which they possess several varieties, amongst others the Ethiopian *musae ensete*. It is prepared by them in various ways, being even made into flour and a fermented liquor which they brew from it. Sweet potatoes, haricots, various kinds of gourds and tomatoes, maize, millet, papaw fruit, rice, and vegetables introduced by the Arabs, are amongst their alimentary plants. The coffee-shrub is also cultivated, but yields a very small

berry, of which the Wa-Ganda make no infusions, using them merely for chewing purposes. They rarely eat meat, as all the live stock, consisting of thin and bad milch cows, goats, and fat-tailed sheep, belong to the Huma, who do not sell them. On the shores of the lake, and on the islands, the inhabitants, mostly ichthyophagous, find abundant nutriment in the multitude of fish abounding in the N'yanza. Nor do the Wa-Ganda despise smaller creatures, readily eating termites and locusts, and even chasing swarms of flies, which they capture by means of nets drawn quickly through the air.

Owing to the cool atmosphere of these central plateaux the Wa-Ganda build their dwellings more carefully than most other tribes of the continent, and these huts are large enough to permit all domestic work being done within. They are nearly always of the beehive type, consisting of a double hemisphere or dome of branches supported by posts, and thickly thatched with straw of the so-called "tiger grass," some eighteen or twenty feet long. Between the two roofs the air circulates freely, keeping the interior of the cabin fresh and sweet. A sloping ledge of beaten earth round the outside carries off the rainwater during the wet season. Many of the houses have a low porch, under which they enter on all-fours. This, combined with the custom of prostrating themselves before superiors, is the cause of the pouch-like wrinkles that most of the natives have on their knees. Inside, the ground is strewn with bundles of grass disposed in geometrical figures, which produce a pleasing effect until the walls become blackened through the want of outlets for the smoke. Recently the Arabs and the Europeans have constructed other and larger houses, with gables and windows; but the king has not permitted them to erect stone buildings, none having a right to inhabit a grander house than the king's palace. The national costume is also changing under the influence of foreigners introducing new fashions.

Amongst the Central African tribes the Wa-Nyoro and Wa-Ganda alone clothe themselves from head to foot, pain of death even being the penalty for men or women leaving their houses too scantily attired. Till recently the national costume was the *mbugu*, a garment of bark stripped from a species of fig-tree (*ficus ludia*), and beaten to render it supple. Over the *mbugu* the chiefs wore a robe, either an ox-hide or made up of twenty or thirty skins of the little *ntalaganya* antelope, which is no larger than a hare, and whose brown fur is remarkably beautiful. But the Arab dress is gradually prevailing, even the poorer classes buying the *haik*, the shirt, the girdle, and the caftan, while the chiefs deck themselves with rich turbans or with the Egyptian fez. Stockings and Turkish slippers are also replacing the coarse buffalo-skin sandals. Their arms are also supplied from Zanzibar, and the Wa-Ganda warriors have already substituted modern rifles for the old-fashioned spears and bows. The Egyptian Government has in vain forbidden the exportation of small-arms to the Nyanza region, for these weapons continue to be imported from other sources.

The practice of polygamy is far more general amongst the Wa-Ganda than amongst the Europeans and Asiatic Mohammedans, the chiefs having no limit to the number of their wives, who are also their servants. The late King M'tesa is

said to have had no less than seven thousand, obtained in exchange for trifles such as some domestic animal, a few needles, or a box of pills. The chiefs follow their sovereign's example in surrounding themselves with a host of wives, and the smallest vassal has his harem. The grandees thus absorb such a large portion of the female population that, in spite of the preponderance of girls, there are not enough left for all the Wa-Ganda. Peasants are often seen whose scanty crops have never sufficed to purchase a single wife. No law forbids the marrying of near relations. On the death of a father the eldest son even inherits all his wives, with the exception of his own mother, occasionally sharing them with the other members of the family. During the period of lactation, lasting two years, the women live apart from their husbands, the king and the chiefs having for these nurses separate houses scattered throughout the kingdom.

Nearly all domestic work falls on the women and slaves, the free man being above any toil except that of building his own house. He is born a soldier, and must keep his strength for the wielding of arms. The Wa-Ganda naturally have all the vices produced by such a state of things. They are liars, idlers, and thieves, those who have wives and slaves to do their work passing their time in gambling and drinking. The traveller is most struck by the disregard the Wa-Ganda have for human life. Killing a man is a mere trifle that no one troubles himself about. A court-page wanting to try a rifle shoots the first passer-by, and returns delighted with his weapon and his skill. Another complains to the king of always serving, saying that he should like to be a chief. "Well then, kill your father;" and the son hastens to put this idea into execution, so as to inherit the women and slaves, which will enable him to fold his arms and do nothing in his turn. And yet the Wa-Ganda cannot be called a cruel people. They are rather inclined to benevolence, generally treating their slaves with great gentleness, and welcoming the traveller with kindness. U-Ganda is said to be the only African country where the life of the guest has always been scrupulously respected. When a war breaks out all the strangers are enclosed in a village and placed under the charge of a chief responsible for their safety and bound to furnish them with food and shelter. But if they withdraw from the place assigned to them, the chief is no longer answerable for the consequences.

Endowed with great intelligence, and speaking an extremely sonorous, pliant, and logical language, the Wa-Ganda are probably the only African people who have made any real progress since 1862 when Speke, the first European visitor, penetrated into their country. Wa-Ganda envoys were already despatched to England in 1880. New plants have been introduced, together with new methods of culture, and agricultural labour is increasing. Very skilful in forging iron, the Wa-Ganda imitate perfectly European objects, and can even change flint-lock guns into modern rifles. They readily acquire foreign languages, and Swaheli, the idiom of the coast, and the most useful in Eastern Africa, is already spoken fluently in the capital and the market-towns. A certain number of chiefs also speak and write Arabic. In a few days school-children master the difficulties of the Latin alphabet, made much easier by the English missionaries than that of the

Arabic language, in which the sound so rarely corresponds to the symbol. The Ganda alphabet is composed of Latin letters, x and q, however, being replaced by other characters.

RELIGION—TRADE—ADMINISTRATION.

Hitherto foreign religions have scarcely had access to this country. Islam, which is making so much progress north and south of the plateau, seemed destined to prevail in U-Ganda; but the practice of circumcision, which nearly all Mussulmans have to undergo, except perhaps in Senaar and the Blue Nile, infringes the laws of the country, which, though permitting murder, forbids all mutilations. A hundred young men who had been circumcised were burnt by order of the king. Still, foreign Mohammedans have been allowed to build a mosque. The Catholic

Fig. 29.—SOUTH U-GANDA.

Scale 1 : 2,400,000.



and Protestant missionaries have made but few converts, although they both hoped to be able to strike a great blow by converting the king, baptised in anticipation as "Constantine the Black." For the rest, the Wa-Ganda have neither idols nor fetish gods, properly so-called; they believe in a universal creator, Katonda, whom, however, they do not worship, believing him too far above them to condescend to listen to their prayers. Hence they confine themselves to invoking the *lubari*, either well-disposed genii or dreaded demons, dwelling in the lakes, rivers, trees, and the rocks of the mountains. Mukusa, the god of the Nyanza, becomes occasionally incarnate in a wizard or a witch, announcing through this medium rain or drought, peace or war, triumphs or disasters. Another dreaded god, he who lets loose the scourge of small-pox, seems to be the spirit of an ancient king, dwelling on the west of Mount Gambaragara above the region of the clouds. All the kings have their apotheosis, and after becoming demi-gods continue to govern the people, massacring or par-

doning as they did before their death. Amongst the most venerated is the god of thunder, and the place where lightning is seen to strike is held as sacred. Here an archway is built, under which no stranger has the right to pass; or else a hut is raised on the spot as a sort of temple, which, however, must not be repaired when it falls in ruins. Against all the dangers which surround him, proceeding from the evil genii and powers of the air, the Ganda man protects himself by amulets of wood, stone, or horn, and by shreds of cloth made for him by the *mandea*, or "medicine-men." These magicians appear also to have a sort of recognised influence, due to their skilful treatment of diseases with roots and nostrums. According to Speke, an ecclesiastical fief, over which the king of U-Ganda has only an indirect power, occupies a large tract on the left bank of the Nile.

In U-Ganda all the trade of any importance is in the hands of the Arabs and the Zanzibar half-castes. Their trading stations are limited on the north by the Somerset Nile, and the series of cataracts from Karuma to the Murchison Falls, and if they penetrate westwards towards the Albert Nyanza they still keep their depôts in U-Ganda. They barter guns, powder and shot, woven goods, glassware, and a few European articles, for ivory and slaves, the latter the great staple of trade in Central Africa. At least one thousand blacks are thus sold annually to the Arabs. As the elephants retire before the hunter deeper and deeper into jungles remote from all human dwellings, the Wa-Ganda have no other means of paying their debts than by annually handing over an ever-increasing number of slaves to the dealers in human flesh. It has already been ascertained that the slave element is actually diminishing in the country. Ivory comes chiefly from U-Soga, and salt is imported from the banks of the Albert Nyanza across U-Nyoro. Till recently a little trade was also carried on with the Egyptian possessions in Sudan, to which U-Ganda supplied coffee, tobacco, and cattle, in exchange for cotton-stuffs, iron, and Turkish slippers. Money is still rarely employed in these transactions, the recognised commercial currency being the *doti*, or "eight cubits" of calico of the value of one thousand cowries. Thanks to the numerous caravans journeying between the sea and the lake, by the easy routes of the Masai country, the facilities for exchange are increasing. Hence there can be no doubt that a civilised system of trade will soon replace that of barter. The navigation of the Nyanza has become less dangerous since the Arabs' dhows have made their appearance on its waters, and in U-Ganda itself the former miry paths are being replaced by good routes. The road connecting the capital with its port on the Nyanza would do honour to Europeans. It is carried over a swamp on a solid foundation of wild-palm trunks placed side by side.

The Egyptian conquests at the time of their greatest extension never reached the frontiers of U-Ganda. The officers of the Khedive penetrated into the country only under the title of ambassadors. The old feudal system has undergone no change since the kingdom has entered into commercial relations with Arabs and Europeans. In theory the king is absolute master of land and people, and is free to act as he pleases in matters of small moment, such as the lives of his women or of the *wakopi*, members of the agricultural class. M'tesa well deserved his name,

which according to one interpretation means "he who makes all tremble." A small army of executioners, their heads bound with cords, always awaited his orders, accompanying him in all his expeditions. But he was not absolute master in state affairs, his power being controlled by three *wakungu*, or hereditary vassals. The *katekiro*, or chief functionary, a sort of "mayor of the palace" and governor of U-Du, is nominated by the king, and may be chosen even amongst the peasantry. He takes his place with the sovereign and the three *wakungu* in the privy council, and in the king's absence presides over the *luchiko* or governing body, composed of all the grandees of the country, vassals and feudatories, *wakungu* and *wakongoli*. The head cook and other palace dignitaries have also a voice in the council. At the death of the king the right of nomination belongs to the three *wakungu*, who select one of his children, imprison his brothers during their minority, and then burn them, reserving two or three to continue the race, should the new king die without issue. If the three great chiefs disagree as to the choice of the sovereign, the question is decided by war, the conqueror enthroning his choice. For their battles the *wakungu* have no lack of men, all able-bodied persons, from five hundred thousand to six hundred thousand altogether, being trained in the use of arms and obliged to obey the first summons of their chiefs. The royal guard is partly composed of peoples of Eastern Sudan and Dongola, deserters from the Egyptian army. The fleet consists of several hundred canoes.

TOPOGRAPHY OF U-GANDA.

The capital changes according to the king's caprice. In 1862, at the time of Speke and Grant's visit, the royal residence was at *Banda*, which, for a country of large trade, would appear to be most favourably situated on the crest of the portage between the great gulf of Mwaru-Luajjerri, the Murchison Bay of the English, and the river Katawana-Luajjerri, which joins the Nile at Lake Ibrahim. A few scattered hamlets in the midst of ruins, which must soon disappear, are now all that remains of *Banda*. *Rubaga* is the most important present capital, lying about seven miles towards the north-west, on a hill encircled by rivulets which form the head-stream of the M'werango river, flowing through the Kafu to the Nile. On the summit of the hill, visible from afar, with its lofty gables and flagstaff, stands the king's palace, surrounded with gardens, above which appear the conic roofs of the huts inhabited by his wives and officers. Northwards another hill bears a second royal residence, surrounded by the village of *Nabulagala*, Stanley's *Ullagala*. This is the main depôt of the Arab merchants, and here begins the caravan route towards *M'ruli*, the principal market-town of the Somerset Nile. The two most frequented ports of U-Ganda on the shores of the great lake are *U-Savara*, on the banks of Murchison Bay, and *M'tebbi*, on the gulf limited south by the Sesse Archipelago.

THE KAVIRONDO AND NANDA COUNTRIES.

East of Nyanza the most powerful state is that of Kavirondo, which is said to exercise a sort of suzerainty over all the riverain peoples between the islands of

U-Kerewé south-east, and the country of U-Gana north-east, of the great lake. Thus the two kingdoms of Ganda and Kavirondo would appear to be scarcely separated by the region inhabited by the Wa-Soga. Situated nearly towards the middle of the eastern coast according to Ravenstein's map, but to the north-east of the lake following the statement of Thompson, the most recent explorer, Kavirondo, properly so called, is a grassy plain in the centre of which rise several little isolated hills, whilst in the north stands the lofty Mount Manda. Although the country has an abundant rainfall, it is diversified only by a few clumps of trees. Numerous rivers wind through the plain, and one of them, the Mori, appears to flow from the lake, evaporating in a depression below the level of the Nyanza. But this remarkable statement depends exclusively on the report of an Arab dealer, and made on his return from a journey to the interior. The Mori is said to be crossed by a suspension bridge facing the town of Kamreté. The island of U-Kava, not far from the fluvial basin, is said by Felkin and Wilson to be occupied by a race of dwarfs with a mean stature of less than four feet and a-half.

The Wa-Kavirondo are of the Negro type; they are tall and robust, with almost black complexion, flat nose, and thick lips. Judging from their language, as well as their features, they appear to belong to the same stock as the Shilluks of the Middle Nile. In appearance and speech they are quite distinct from the other riverain populations, who are of Bantu origin. The women tattoo their backs and breasts, the men rarely decorating themselves in this fashion. But like so many other African peoples they do not leave the teeth in their natural state, but extract the two middle incisors of the lower jaw. They go naked, or else only wear a waist-cloth, to which the women add a tail of bark. This portion of their costume, like the plaited tails of other native communities, explains the fables, so long believed by the Arabs, of African tribes forming the connecting link between man and the monkey. Apart from this tail the Kavirondo women have no ornaments, but they daub their bodies with grease. Unlike the Wa-Ganda, the Wa-Kavirondo do not consider themselves dishonoured by work, but take their share with the women in all agricultural operations. They also employ themselves in the chase, in fishing, in breeding domestic birds, in which they are very skilful, and in navigating the Nyanza with sailing boats much more substantial than the canoes of the Wa-Ganda. They are as peaceful as they are industrious; nevertheless they defend themselves courageously against attacks, and the palisades surrounding their dwellings are carefully avoided by the wandering tribes of the interior. The Wa-Kavirondo have a king, who is not master over the lives of his subjects; the country is more of a confederation of republican villages than a feudal realm like U-Ganda. The Wa-Kuri and Wa-Kara, living more to the south on the coastlands bounded by Speke Gulf, resemble the Wa-Kavirondo in language and customs, except that the Wa-Kara clothe themselves in bark, tattoo the breast, and paint the body red and white by means of clay mixed with oil. But amongst the numerous tribes of the eastern slope of the Nyanza, several constitute by their customs, and possibly their origin, isolated ethnical enclaves distinct from the surrounding groups. Such are the Wa-Nanda, inhabiting the upland valleys of the same name

north of Kavirondo. They appear to be an extremely ferocious tribe, carefully avoided by all traders passing in the vicinity of their haunts. They are described as "clothed with knives," which they wear on their arms, thighs, body, and waist.

The centres of population in U-Kavirondo are sufficiently large to merit the

Fig. 30.—U-GANDA: RUBAGA, PRINCIPAL RESIDENCE OF M'TESA.



name of towns. The largest is *Kabondo*, situated on the eastern frontier, near the Masai country. At *N'yauca*, about four hours' march to the north-west, stands the residence of the king, followed in the same direction and about the same distance by *Sandegé*, the depôt of the Mussulman merchants of Zanzibar, commanding a

view of the Nanda range. The caravans, which travel slowly, scarcely making more than eight or nine miles a day, take two whole months to perform the journey. The missionaries of Islam, more fortunate than those labouring in U-Ganda, claim Kavirondo as their conquest; at least the greater part of the people have submitted to the rite of circumcision.

THE U-NYORO TERRITORY.

North of U-Ganda most of the peninsular district lying between the Albert Nyanza and the Somerset Nile belongs to the Wa-Nyoro people. Formerly all the country stretching between the two Nilotic lakes constituted the vast kingdom of Kitwara, governed by a dynasty of Wa-Huma conquerors. This empire has been divided into many states, of which U-Ganda is the most powerful; but the sovereign of U-Nyoro would appear still to enjoy a sort of virtual sovereignty over his neighbours, and always bears officially the title of King of Kitwara. Nevertheless U-Nyoro cannot be compared to U-Ganda, either in the extent of its cultivated territory, in the number of its people, or in political unity. In spite of the natural frontier, indicated by the banks of the Nile and the lake, its limits are rendered uncertain by the incursions of hostile tribes. Uninhabited borderlands separate U-Nyoro from U-Ganda; but here lies a region of great commercial importance, belonging at once to two kingdoms as a place of transition, which caravans can traverse only under escort, usually choosing the night for their march. This debatable region is the zone of land comprised between the marshes of *Ergugu* and the abrupt bend of the Nile at M'ruli. The Wa-Ganda are compelled to force their way through it when proceeding from Rubaga to Sudan, and the Wa-Nyoro of the west have no other way by which to visit their villages situated to the west of the Nile. U-Nyoro is in a continual state of warfare, dividing it into petty states, which increase or diminish in extent according to the vicissitudes of the battlefield. It is the custom on the death of the sovereign for his nearest relations to dispute the succession; the corpse is not buried till after the victory of one of the competitors. The latter, however, often hastens to celebrate his triumph prematurely, in which case the war continues for generations between brothers and cousins. At present U-Nyoro is divided between hostile kingdoms; besides which Egyptian garrisons, cut off from the centre of administration at Khartum, still occupy the line of the Nile between the bend of Foweira and Lake Albert Nyanza. Numerous tribes have also retained their independence, especially in the high south-western district between the two great lakes.

U-Nyoro presents on the whole the aspect of a plateau with a north-easterly slope parallel to Lake Albert Nyanza. It enjoys a copious rainfall, and many depressions in the surface are occupied with swamps rendered dangerous to the wayfarer by the holes caused by the heavy tramp of elephants. The lacustrine basins are also strewn with gneiss and granite boulders, whose presence in these alluvial tracts seems inexplicable. Except in the vicinity of the Nile, vegetation appears to be on the whole less exuberant than in U-Ganda. Leguminous plants,

however, are more numerous represented, and the delicate foliage of the acacia forests looks in some places like a light haze enveloping the stems and branches of the trees. Antelopes still abound in these regions even on the route hitherto followed by most explorers along the Khor-Ergugu between Rubaga and M'ruli.

The Wa-Nyoro are a smaller people than their Wa-Ganda neighbours, to whom they also appear to be inferior in physical strength and intelligence, but not in the art of forging and pottery. They belong to the same race, and speak an allied Bantu dialect, but are of a lighter complexion, usually a dull red, and the hair is crisp rather than woolly. Although of cleanly habits, never failing to wash their hands before and after meals, their huts are badly kept, and constructed mostly of branches planted round a stake, and converging upwards so as to form a regular cone. Their only domestic animals are cows, goats, and a poor breed of poultry. In case of distemper these animals are treated by bleeding, and the blood

Fig. 31.—U-NYORO.

Scale 1 : 3,000,000.



saved for human consumption. Like the Wa-Ganda, the Wa-Nyoro wear clothes, and consequently hold themselves superior to the naked Negro people dwelling beyond the Nile. The young men, however, do not assume their bark or skin garments before the age of puberty, when they are accepted as members of the tribe, and their new dignity celebrated by the extraction of the four lower incisors. Two lines tattooed on both sides of the forehead further distinguish them from the surrounding populations.

Polygamy is universal, even amongst the poor, who have always two or three wives, although of "inferior quality," for a handsome spouse would cost at least four cows. As in U-Ganda, brothers may marry their sisters, fathers their daughters, while the son inherits the whole paternal harem except his own mother. The king has a general monopoly of all the unmarried women, for whom he selects husbands amongst his courtiers. The sons of these unions become royal pages,



NATIVES OF UGANDA.



the daughters following their mother's profession. The wives of the king and chiefs would regard themselves as degraded by manual labour, their whole ambition being to grow corpulent and acquire double the weight of their humbler sisters. Few of the Wa-Nyoro women give birth to more than two or three children.

Islam has already penetrated into U-Nyoro. But although many of the chiefs have become converts, the bulk of the people have accepted of the new religion little beyond its prescriptions regarding prohibited food. The "medicine-men" still universally practise magic, seeking to secure the favour of "the great wizard" and of the spirit-world by means of charms, incantations, and dances. The fortune-tellers, belonging to a wandering caste compared by Emin-Bey to the European gypsies, are also frequently consulted. The "evil eye" is much dreaded, especially that of old women, whose glance suffices to poison food and drink. All disorders are attributed to sorcery, and in order to recover the patient spits three times in the face of every woman he meets, the cure being effected when he reaches the actual delinquent. Every event, from the meeting of a wild beast to the motion of a leaf, has its auspicious or unfavourable meaning, so that the people spend their lives in studying the aspect of vegetation, the flight of birds, the state of the firmament, and all other outward phenomena. No one ever retraces his steps, and if he has to return he chooses a path parallel to the first, or else opens a new way through the bush. The blacksmith accompanies his work with a song, the words of which enter into the metal and endow it with its peculiar properties. Two men swear friendship by mingling their blood and dipping a coffee-berry in the mixture in order to assimilate their respective qualities. Between two uterine brothers mutual trust is unbounded and never betrayed. Hence the king selects his most intimate ministers amongst those united to him by the brotherhood of consanguinity. The nocturnal dances, celebrated by the flickering light of torches or the lurid flame of the stake, are said to produce an ineffaceable impression. The wizards, daubed with ochre, decked with fantastic finery, conjuring the demons by their wild gesticulations, leaps, and shouts, flitting about in the glare and suddenly plunging into the surrounding gloom, appear themselves like spectres of the night, or fantastic beings from another world. The Wa-Nyoro have also a warlike dance like that of their kindred, the southern Zulus, and, like them also, make war with assegai, spear, and shield.

U-Nyoro is also occupied by peoples of other stocks, the most powerful of which are the Lango or Longo, who hold both sides of the Nile between Foweira and Magungo. These are probably of the same origin as the Wa-Huma, and even still speak a Galla dialect. They enjoy full freedom, forming independent communities in the midst of the Wa-Nyoro, and recognising the authority of the chiefs only during their warlike expeditions. They are otherwise specially devoted to the offices of the toilet, spending long hours in arranging their elegant or imposing head-dresses. The prevailing fashion is a kind of helmet, in which every lock of hair is interlaced with many-coloured wools, and terminating in a superstructure of plumes, wreaths of shells or glass beads, or curved projections in imitation of buffalo horns. Whole years are required to bring some of these sumptuous head-

dresses to perfection. The Lango women are the finest and most symmetrical in the whole region of the equatorial lakes. They wear little clothing beyond waistbands, necklaces, armlets, and rings.

South of the Nile is found another ethnological group, formed by the Wa-Tchopi or Shefalu, in speech and appearance resembling the Shilluks, whose proper domain lies some six hundred miles farther north. According to the national traditions, the Shefalu are descended from a conquering people, who came originally from that direction.

Masindi, on a river flowing to Lake Albert, was the residence of the king of U-Nyoro when the country was first visited by Speke, Grant, and Baker. But in 1877 it was replaced by *Nyamoga*, which is also conveniently situated in the centre of the region enclosed between the lake and the great bend described by the Nile below *M'ruli*. The latter place, which occupies an important strategic and commercial position on the Nile at the converging point of the caravan route from U-Ganda, has ceased to be the advanced southern outpost of the Egyptians. Even before the Mussulman revolt in Dar-For the troops had been withdrawn from *M'ruli* and from *Kirot*, which lies in a forest clearing farther north-west. The western bulwark of the Khedive's possessions is, or was till recently, *Foweira* (*Faucera*, *Fauvera*, *Faveira*), whose site has been shifted to a cliff on the east bank of the Nile near the Kubuli confluence, and not far from the point where the river trends westward to Lake Albert. North of the river stands another fortified station near the Karuma rapids, and north of Panyatoli, residence of one of the most powerful Wa-Nyoro chiefs. A third Egyptian fortress in U-Nyoro is *Magungo*, on the right bank of the Nile, where its sluggish current joins Lake Albert. Being enclosed by a ditch ten feet broad, this place is impregnable to the badly armed and undisciplined troops of the Lango or Wa-Nyoro chiefs. East of *Magungo* steamers ascend the river as far as the wooded gorges of the Murchison Falls.

Mahaghi (*Mahahi*), another fortified station, has been formed by the Egyptians on the west side of Lake Albert, where it is sheltered by a headland from the northern winds. The whole of this coast region, which takes the name of Lur, is inhabited by Negro tribes akin to those of the Bahr-el-Ghazal, and speaking a language which differs little from that of the Shuli east of the Nile. In habits they resemble the Wa-Nyoro, with whom they formerly maintained constant commercial relations, and whose suzerainty they recognise; without, however, paying any tribute to the king. South-west of the Egyptian station are some hot springs, sulphurous, like all hitherto discovered in the Upper Nile regions. A considerable traffic is carried on by water between both sides of the lake, especially with the ports of *M'bakovia* (*Vacovia*) and *Kibero*, where salt is yielded in abundance by the surrounding argillaceous clays.



MURCHISON FALLS.



CHAPTER IV.

REGION OF THE UPPER NILE TRIBUTARIES.

THE section of the Nilotic basin comprised between Lake Albert and the Bahr-el-Ghazal confluence presents a marked contrast to the surrounding land in its abundant waters, its converging streams, extensive marshy tracts, and the general uniformity of its slope. The natural limits of this distinct geographical domain are formed by the course of the Nile and Asua on the east and south-east, and of the Bahr-el-Ghazal on the north. In the historic life of the continent the inhabitants of this watery region have also played a separate part. Here lies the chief connecting route between the Nile and Congo basins. The water-parting being marked by no perceptible "divide," no barrier is presented to the migration of peoples between the two great arteries. Thus the hydrographic parting-line forms no natural limit between ethnical groups, some of which, such as the Niam-Niam, occupy both sides of the slope, while continually encroaching northwards. Through this region of transition must pass the future continental highway from east to west between the Red Sea and the Bight of Benin. It has already been partly opened by Peney, Lejean, Petherick, Piaggia, Schweinfurth, Junker, Bohndorff, and other explorers are eagerly following in their footsteps.

Northwards this region has a natural limit; indicated, however, not by any water-parting, but by the climate, which produces a marked contrast in the aspect of the land, its vegetation, fauna and inhabitants. The latitudinal depression flooded by the waters of the Bahr-el-Arab coincides in a general way with this climatic frontier. South of it the rainfall is sufficiently copious to feed perennial streams, or at all events rivers flowing for six months in the year. But on the north side we have nothing but wadies flushed only during the heavy rains. Hence the great difference presented by the forest vegetation along the right and left banks of the Bahr-el-Arab. On one side we find the baobab, with its huge inflated trunk, on the other the lulu, or butter-tree, in some places covering hundreds of square miles. The large apes never cross the frontier into Kordofan; nor does the elephant venture north of the Bahr-el-Ghazal, where the flocks and herds are also free from the ravages of the tsetse-fly. The southern region belongs to the Negro and his horned cattle, the northern to the horse and camel-breeding Arab.

twelvemonth in the wooded districts skirting Dar-For and Kordofan on the south. The destruction of these unacclimatised animals is attributed by Emin-Bey to the spontaneous development of multitudes of entozoa, while the natives suffer much from the "Medina worm" as far as the third parallel north of the equator.

INHABITANTS.

Fifty million people might easily live in this fertile region, in some parts of which the villages follow in close succession, and the jungle has been replaced by gardens. But almost everywhere are visible the traces of murderous and marauding inroads, and many districts recently under cultivation are now completely depopulated. Nowhere else in East Africa has so much ruin been caused by the slave-dealers, including many Egyptian officials, who for many years openly carried on the traffic in human flesh. Protected by their very position, these functionaries were able quietly to promote their "civilising mission," as it was pompously described in the official reports. Even still the routes followed by the convoys of wretched captives regularly forwarded from the Arab stations to the Lower Nile may be recognised by the bleached bones of the victims of this nefarious commerce. And when it was at last officially interdicted, the ostentatious Government proclamations were easily evaded by the Mohammedan and Christian dealers alike. They no longer engaged personally in the razzias, but they fomented the tribal feuds, encouraging the slaughter of the men, the capture of the women and children. Then humanity itself seemed to require their intervention, to rescue the captives and reserve them for a less cruel bondage in the northern cities. Such was the régime introduced by the "era of progress," under which not only was the country wasted, but its surviving inhabitants debased by the hitherto unknown vices of a "higher culture."

When at last the European governor, Gordon Pasha, attempted in 1878 to put an end to these horrors, the revolt broke out, and while the functionaries were officially encouraged to act vigorously, the rebels were secretly supplied with munitions of war. The slave-dealers were openly or covertly abetted by nearly all the Egyptian officials. The hope, however, of establishing a separate state under the notorious slaver, Suleiman, was thwarted by Gordon's energetic action, aided by the skill and zeal of his lieutenant, Gessi. And although both of these brave men were soon recalled and sacrificed to court intrigue, the old régime of terrorism seems never to have been restored. The Khedive's authority still survives, at least in name, and the Kordofan rebels seem again circumvented in their attempts to cross the Bahr-el-Ghazal by Gordon's return to Khartum in 1884.

Meantime the communications with the north have been interrupted. By the very force of circumstances this province has, at least for a time, become autonomous; but the time seems still remote when the Sudan will be able to dispense altogether with foreign intervention in its internal affairs. A bright prospect is nevertheless in store for it, as soon as the slave-trade has yielded to legitimate commerce, dealing in corn, fruits, vegetables, butter, cotton, hides, metals, gums,

wax, caoutchouc, and many other local products instead of the present staples—ivory and human flesh. The climate is suitable to Europeans willing to lead sober and active lives. But the extensive swamps in the low-lying districts must always render it dangerous to immigrants, until health resorts, like those of India, have been established in the southern uplands.

The native populations have in many places become intermingled through the constant local wars and razzias of the slave-hunters; the old tribal limits can no longer be determined; the territories have shifted their inhabitants. During the last generation stable communities have been maintained only on the banks of the Nile between Magungo and Dufilé, where the slave-dealers have scarcely succeeded in penetrating or establishing their footing for any length of time. Hence the population is still dense in this district, in which we may wander for days without meeting any waste or unreclaimed lands. In this peaceful region, for generations undisturbed by foreign wars, the manners of the people have become softened, crime is almost unknown, and the traveller may move about freely unarmed. How great the contrast with those communities that have been harassed by the slave-hunter! Yet nearly all are of one origin, and had formerly the same habits, the same social and political organisation. Mostly of Negro stock, they speak languages entirely different from those current amongst the Bantu peoples of the equatorial lakes. But of these diverse tongues, two or three only have been reduced to writing by the missionaries. The Bari, Denka and Shilluk have thus been partially fixed by grammatical works and religious translations. Of all the African linguistic groups, this is on the whole the least known, although the country has been more frequented by Europeans than many other regions of the interior.

THE SHULI AND MADI.

Southernmost of these Nilotic tribes are the Shuli on the east, and the kindred Lur, or Luri, on the west bank of the river, where it emerges from Lake Albert. Their joint domain comprises the left side of the lake, and an extensive tract stretching along the Nile northwards beyond the Asua affluent. The Shuli would be of pleasant outward appearance but for the habit of piercing the lower lip, and inserting a piece of crystal, a stick, or any other ornament, three or four inches long. They also extract the four upper incisors, causing their utterance to be very indistinct, and with an oxide of iron daub their bodies red in all sorts of fantastic forms. Like the Madi on their northern and the Lango on their southern frontier, the Shuli pass a great part of their lives in thus painting and decking themselves. The elaborate headdresses vary according to the taste of each individual, but on all alike the greatest care is lavished. Some are raised several stories high, and embellished with ornaments of all kinds—flocks of wool, wreaths of foliage, rings, strings of pearls—the whole forming an architectural edifice sufficiently incommensurate to the bearer. The rich throw an antelope skin over their shoulders, the poor a goatskin, loading wrists, legs, and neck with iron rings. Under this weight

of metal locomotion becomes difficult, while to look to the right or left the fashionable Shuli has to wheel his whole body half round. The costume is completed with red and white beads, and diverse amulets of silk, roots, teeth, horn, and the like. The women, however, wear nothing but a loin-cloth, a few glass trinkets, some decorative paintings, and a queue, like that of the Niam-Niam.

The Shuli, Lur, and Madi are distinguished from the neighbouring tribes by the consideration they pay to the women in all social matters. Young girls, living apart in huts reserved for the purpose, have the privilege of choosing their own husbands. They are never beaten, and the husband seldom takes any important step without consulting his wife, or receives any present without sharing it with her. The women are also exempt from field operations, and occupy themselves exclusively with household duties.

The national name, Shuli, recalling that of the Shilluks on the White Nile, points to a common origin of these tribes, a conclusion confirmed by the obvious affinity of their respective idioms. The Shuli, however, unlike their northern kindred, are a peaceful people, engaged chiefly in agricultural pursuits. They grow excellent tobacco, various kinds of vegetables, and large quantities of cereals and sesame. In the midst of their orchards they plant here and there certain fetish trees, loading the branches with the horns, teeth, and heads of animals captured in the chase. Like the Nyanza tribes, they also dedicate small shrines to the local genii, and never start on any enterprise without consulting the wizards. All travellers meet with a friendly welcome, and on their departure a goat is sacrificed by the wayside to avert all dangers on their homeward journey. Three days of the week are considered propitious, three ill-omened, and the seventh indifferent. But through their ignorance of these local superstitions strangers often become involved in serious troubles.

In the Shuli territory the Egyptians have established a few military posts placed at intervals of two or three days' march from each other, so as to overawe the whole land by a system of strategic routes. *Wadelai*, one of these stations, lies on the left bank of the Nile, at the confluence of a small tributary. But the most important place is *Fatiko*, founded by Baker, some 60 miles east of the river, between two affluents of the Asua, in a fertile district commanded by granite heights. One of these crags rises north of the fort about 300 feet above the plains, affording an extensive view of the whole region beyond the Nile. *Fatiko*, standing at an altitude of 4,000 feet above the sea, occupies the culminating point of the Shuli territory, whence the land falls in abrupt terraces north, west, and south. Lying midway between Foweira, on the Somerset Nile, and Dufilé, on the Bahr-el-Jebel, it is favourably placed for trading purposes, and exports much corn and wax. Other large villages in the Shuli country are *Fajello* (*Fajuli*), *Fadibek*, *Farájök* and *Obbo*, lying east and north of the Asua river.

The Madi, who occupy the right bank of the Nile north of the Shuli, resemble them in appearance, in their style of headdress and other usages, notably the respect paid to their women, who take part in their tribal deliberations. Although apparently of kindred stock, their language is quite distinct from that of the Lur,

Shuli, and Shilluks, showing affinities rather with that of the Niam-Niam. This difference in speech and resemblance in customs is doubtless due to the presence of two ethnical elements now fused in one nation. The foreign intruders probably came from the south-west, where the Madi occupy the water-parting between the Nile and Congo basins, and where they are conterminous with the Kalika, allied to them in speech and origin.

In the Madi territory the chief Egyptian station is *Duflé* (*Dufli*), on the west bank of the Nile, near the great bend it describes before its confluence with the Asua. It occupies the apex of the triangle formed by the two streams and by the

Fig. 33.—SHULI MUSICIANS.



Somerset Nile between Foweira and Magungo, over against another river navigable for some 12 miles. Thanks to this important strategical position, Duflé cannot fail to become a large centre of trade. Here is the station of the steamers on the Upper Nile, which is obstructed farther down by the Fola Rapids. Beyond its palm-groves are visible the peaks of the Kuku range, rising at some points 600 or 700 feet above the river. Between these hills and the Bahr-el-Jebel are the fortified posts of *Laboré* and *Mugi*, near the Yerbora Rapids, while southwards Duflé is connected with Fatiko by the populous village of *Fuloro*, one of the granaries of Egyptian Sudan. The fields of the Madi in this district are cultivated with great care by the women and children, who sow each grain of corn separately.

THE BARI.

The Bari, who follow the Madi along both banks of the river, form one of those groups of Negro tribes most remarkable for their physical beauty and haughty carriage. The traveller can easily study their fine proportions, as they go perfectly naked, considering it effeminate to cover the body. Peney even tells us that they are "afraid of clothes," and that to assure himself of a favourable reception he had to take off his own garments. Although the women are allowed to dress, most of them merely wear the *rahad*, or loin-cloth, made either of little iron chains or strips of leather, and a hide round the hips. Their hair is always shaved off, while the men leave a little tuft on the top of the head, which the chiefs deck with ostrich feathers. Unlike the Shuli, the Bari do not cover themselves with amulets and bracelets, although some also paint the body, especially for the war dances, and tattoo themselves with arabesques or many-coloured geometrical designs. These operations, undergone at puberty, are very dangerous and often end in death. According to Felkin, the Bari, recently decimated by small-pox, have invented and applied the practice of inoculation, apparently with perfect success. The Bari warriors are considered the bravest of all the Nilotic tribes. Amongst them men are often met wearing on the wrist an ivory bracelet; these are the hunters who managed to kill an elephant in single combat. The slave-dealers generally recruited their bands of slave-hunters amongst the Bari, and the name of these banditti was dreaded as far as the vicinity of the great lakes. But the Bari have themselves suffered much from the razzias of the slave-traders, certain parts of their territory having been completely depopulated. Knowing that the principal wealth of the Bari consists of cattle, and that they are very proud of these beautiful animals, decorating them with bells, like the Swiss cows, the slavers first captured their herds, the Bari bringing their own wives and children to ransom them, unless a fortunate expedition enabled them to substitute the families of some neighbouring tribe. The cow is held as sacred amongst these Nile populations. Instead of squatting, like most other Negroes, or sitting cross-legged, like the Arabs, the Bari are accustomed to sit on stools painted red.

Catholic missionaries have been for some time at work amongst the Bari, but with small success, the conduct of the Christian slave-dealers being scarcely of the kind to assist the teachings of the priests. The Bari still adhere to their magical rites, their ancient animistic religion, their worship of the serpent, called by them "grandmother," and their veneration for the dead, whom they carefully bury in a sitting posture. "Formerly," said they, "we could climb to heaven by a cord connected with the stars, but this cord has been broken." The ruins of the church, the head-quarters of the Upper Nile missions, are no longer to be seen, a fine avenue of lemons alone marking the site of what was the city of *Gondokoro*; the bricks of the Austrian missionaries' houses have also been ground down by the natives, and mixed with grease, with which to paint their bodies. Baker Pasha had made Gondokoro the centre of his administration under the name of *Ismailia*; but on account of the shifting of the river, and the development of marshes and sandbanks,

Gordon removed his residence to *Lado*, or *Lardo*, some twelve miles farther down on the left bank of the river. This town, whose brick buildings and sheet-iron roofs are visible above the palisades, presents a fine appearance in comparison with the neighbouring villages. It is surrounded by a promenade; a eucalyptus, planted by Emin-Bey, towers above the house-tops; while till recently the quay was crowded with river craft. The other stations in the Bari country above Gondokoro are *Kirri* and *Bedden*, where the river is crossed by a ferry. South-east of Gondokoro stand the villages of *Billigong* or *Belenián*, noted for their iron mines and javelin and lance manufacturers. In the neighbouring Lokoya Mountains dwell the bravest

Fig. 34.—BARI SMITHS.



of the Bari, against whom the whites settled at Gondokoro had often to protect themselves. Farther north the Berri, Bar, or Behr, occupying the prairies north-east of Gondokoro, form a group of tribes distinct from the Bari, speaking an idiom nearly identical with that of the Shuli, whom they also resemble in customs and appearance. Another kindred people are the Shir, whose villages line both banks of the Nile below Lado. Possessing no iron, these blacks fashion their arrow-heads from ebony-wood.

THE LATUKA COUNTRY.

East of the Bari, a territory well watered by wadies flowing towards the Nile from the south-east is occupied by the Latuka, who are entirely different from

their Negro neighbours. Nearly all travellers regard them as of Galla stock, and their language appears to belong to the same family as that of the Ilm-Orma. Their high foreheads, large eyes, straight and shapely nose, thick but not pouting lips, leave little doubt as to their origin. Other populations living more to the east, towards the Sobat, especially the Arboreh, belong to the same family; but the Akkara and Irenga speak different languages. The character of the Latuka differs greatly from that of the neighbouring Negroes; they are merrier, franker, and so brave that slave-dealers have never succeeded in capturing them. If their tribes were united, instead of continually fighting one against the other, they would assuredly be one of the most powerful African nations. Although these Galla immigrants have to a great extent preserved their original speech, physical traits, and character, the Latuka have become a half-caste race, and have adopted many customs of the Nilotic Negro peoples. Like the Bari and Shilluk, they would seem to be ashamed to wear clothes; but they take great pride in dressing the hair in elegant styles, mostly affecting the form of a helmet. The completion of these elaborate headdresses is a work of eight or ten years. The hair, bound with bark strips, is made into a sort of thick felt, ornamented with glass and china beads; a copper plate glitters above the forehead, and nodding tufts of feathers and plumes crown the superstructure. The women, less elegantly formed than the men, and possessing unusual strength, have no right to all this finery, and confine themselves to a few tattooings; they wear a queue like a horsetail, and like most other women of this region, extract the four lower incisors. The Latuka huts resemble those of the neighbouring tribes; they are shaped like a bell or extinguisher, the only opening being a low door, which is entered on all-fours. Near each village is a

Fig. 35.—ROUTES OF EXPLORERS EAST OF
THE BAHR-EL-JEBEL.

Scale 1 : 6,000,000.



120 Miles.

cemetery, whither the bones of the dead, first buried near the dwelling, are brought after they have been completely decomposed. Funeral dances are kept up round the dead for weeks together. The territory of the Latuka is very fertile, and their tobacco, although nearly always adulterated with foreign substances, is in high demand among the neighbouring peoples. In this country the leopard is the only beast that is feared, as it often attacks man. The lion is so little dreaded that Emin-Bey tells us that one of these animals having fallen into a leopard-trap, the people hastened to set it free.

The Latuka district is bounded on the east by the Lofit or Lafit range, rising some 3,300 feet above the plains, and on the south by still higher mountains. The whole country consists of a long fertile valley studded with trees, amongst which is the "higlik," whose saccharine fruit is so rich in potassium that it is used as soap. The villages are tolerably numerous, many even meriting the names of towns. *Tarrangoleh*, the chief town, situated in the midst of the Latuka country on the high bank of the Khor Kohs, is said to contain no less than three thousand huts, not including the sheds for some ten or twelve thousand head of cattle. It is surrounded by a strong palisade, each house being further protected by a separate enclosure. Three-storied turrets stand in many parts of the city, in which sentinels keep guard during the night, ready to strike the war drum at the least appearance of danger. One main street intersects the town, all the rest being merely winding alleys, into which the cows can only enter one by one—an arrangement which simplifies counting, and prevents the enemy from surprising and carrying off their herds. In the northern region of this country, the two villages of *Wakkala*, or *Okkela*, and *Loronio*, also known as *Latomeh*, from the name of its chief, have also a large population. According to Emin-Bey, the women, as in U-Ganda, are far more numerous than the men.

The Latuka are the most easterly of all the Galla tribes, unless the Lango of the Upper Nile and the Wa-Huma of the plateaux are also to be regarded as branches of this race. But on the Bahr-el-Jebel itself and to the west of this river none but Negroes are met. The Niambara, or Niam-bari, occupying a hilly district which forms the water-parting between the Nile and its tributary the Yeï, are akin to their easterly neighbours, the Bari, although their speech is distinguished by a greater variety of tones and sibilant consonants than the language of the neighbouring peoples. Like the Bari, the Niambara are tall and strong and go naked, but load themselves with iron bracelets, rings, and other ornaments of the same metal; while the women wear daggers at the girdle. Although earrings are unknown amongst most of the Nilotic peoples, the Niambara pierce the lobes of the ears, passing glass trinkets through them, and, like the Orechones of South America, distending them on each side of the face. The women also pierce the lips at the corners, and insert a fragment of quartz, or if that is not available, a wooden cylinder or a piece of reed. They wear no loin-cloths, but only a scrap of leather, leaves, or occasionally a small bell. About the middle of the century, before the arrival of the ivory merchants, elephants' tusks were of such little value that they were scarcely used except as stakes for the cattle

enclosures. The Niambara hunt this huge pachyderm in a totally different manner from the other tribes. A man concealed amongst the foliage of a tree waits till the beaters have driven the animal under the branch where he is stationed, lance in hand; then the iron head, from 26 to 30 inches long, plunges to the shoulders into the elephant's back, generally producing a mortal wound. Besides being skilful hunters, the Niambara also carefully cultivate their orchards and fields, have beehives round their huts, and as smiths rival the Bari of Belenian. One of the chief villages bears the name of the tribe. It is situated 2,000 feet above the sea, in a valley surrounded by high hills, joining by a lateral branch the mountain range which skirts the Nile from Mugi to Dufile. The pyramid-shaped Ku-Gu peaks rise above the grassy plains of the Niambara, and mineral springs, used alike by natives and the Arab dealers, burst forth in many parts of the country.

THE DENKA.

Of all the peoples living on the banks of the Bahr-el-Jebel, the Denka or Dinka, also called Jeng and Jangheh, occupy the most extensive domain. Their territory may be estimated at about 40,000 square miles, and their tribes or separate clans are counted by the dozen. The best known are, naturally, those which come in contact with the traders, such as the Tuich, the Bor, the Kij or Kitch, and Eliab on the Nile, and the Waj, Rek, and Afoj to the west, on the Bahr-el-Ghazal tributaries. Other Denka communities are also settled on the right bank of the Bahr-el-Abiad, below the Sobat confluence. But although occupying the route necessarily followed by all travellers ascending the Upper Nile or penetrating to the Congo basin, the Denka have in no way altered their mode of life under the influence of foreign civilisation. They have remained free on their plains or marshes, buying next to nothing from the Arab merchants, the milk of their herds, the fruits of their orchards, and the seeds and vegetables of their fields sufficing for all their wants. On the right bank of the Nile, in the country of the tribe of the same name, stands *Bor*, a fort built by the Egyptian Government to overawe the Denka. Like the Bari, the Denka have also been visited by Italian and Austrian Catholic missionaries, who had settled themselves at Panom or Fautentum, below Bor in the Kij country, on the left bank of the Nile; but they were forced to quit this establishment of the Holy Cross (*Santa Croce*, *Heiligen Kreutz*), on account of the epidemics that ravaged the mission. Nor did their proselytising labours produce any results beyond the collection of vocabularies and translations that they brought back from the Denka country.

The Mohammedan missionaries have also had little success amongst the Nilotic peoples, who have remained nature-worshippers, like most of the other Central African peoples.

Like the Bari, who speak an allied language, the Denka are ashamed to wear clothes, the women alone attaching hides to their girdle. They do not however despise ornaments, wearing iron rings on the arms, ankles, and ears, placing ostrich feathers on the crown of the head, tattooing the face to distinguish

themselves from other tribes, and extracting the incisors of the lower jaw. Nearly all of them shave the head, but the dandies paint their hair so as to make it resemble that of Europeans, and give it a reddish hue by moistening it with animal matter. The natural complexion is of a fine bronze hue; but to prevent it from changing they take constant care to rub the skin with greasy substances and smear it with ashes, which gives them a bluish-grey appearance. Being accustomed to kindle large fires every evening, round which they pass the night with their herds to protect them from mosquitoes, their villages become strewn with large ash-heaps, on which they delight in rolling. The Denka of the eastern region are one of the tallest African races, men often being found amongst them over six feet in height. The Kij are especially tall, but westwards, in the Bahr-el-Ghazal basin, their stature is scarcely superior to that of the average European. They possess generally great bodily strength, although they eat but one meal a day, towards sunset. Their legs are long and thin, and as they live, like the Nuer and Shilluks, in marshy regions, they walk as if on stilts. Seen from a distance moving slowly above the reeds, raising the knee and cautiously advancing their large flat feet, they might easily be mistaken for storks. Like the birds of the swamps, they are accustomed to stand motionless on one leg, resting the other above the knee, and remaining in this position for an hour at a time.

Although living in the iron age, as shown by their preference for implements of this metal, the Denka have no smiths, their alluvia being destitute of iron ores; still they show themselves to be skilful workmen in various industries. Sarcastically called "men of the stick" by their neighbours on account of their favourite weapon, they make ingenious elastic bows and carve curious walking-canes with shell guards to protect the hands from blows. Their houses are larger than those of the neighbouring tribes, and as cooks they possess rare skill, in this respect being unrivalled in Africa. They are great cattle-breeders, possessing vast herds. When an animal falls ill it is separated from the rest, and taken to a well-appointed infirmary for treatment. They never kill but only occasionally bleed them, to drink the blood mixed with milk, and eat the flesh of those alone which die of disease or are killed by accident. In spite of their care, the bovine race appears to degenerate in the country, owing probably to climatic conditions, or else, as Schweinfurth believes, because of the total lack of crossing with other breeds, and the want of salt in their food. Amongst one hundred beasts, scarcely one could be found strong enough to travel from one *murah*, or enclosure, to another, or to carry burdens such as those of the Baggara cattle. In appearance, however, they are handsome animals enough, with slender horns and delicate heads, and might be almost mistaken for antelopes. The bulls have a mane covering the shoulders, neck, and breast, the body and tail being clipped close, giving them the appearance of small bisons. The Denka also breed goats, the only animals they kill for food. A nation of pastors, living in small groups on the plains, the Denka have no public or private form of worship, although many of their local practices are supposed to recall a cult resembling that of the primitive Aryan Hindus. Like the Shilluks and Bari, they respect the cow, and have a remarkable veneration for snakes, which



GROUP OF MAKRAKAS.

they call "brothers;" to kill these reptiles is considered a great crime. Schweinfurth was told that pet serpents are kept in every house, which recognise the members of the family and answer to their names.

THE MAKRAKA.

The large river Yeï, which rises in the "Blue Mountains" near the Madi country and the Upper Nile, and which, after describing a westward bend through some marshy tracts, joins the Nile below Gaba Chambah and the Bahr-ez-Zaraf bifurcation, traverses the lands of the Kakuak, Fajellu, and Kederu tribes, most of whom are related to the Bari and Denka. But amongst the tribes of this basin there is at least one, that of the Iddio, or Makraka, who are entirely distinct in speech, appearance, and usages. They belong to the powerful A-Zandeh or Niam-Niam nation, whose domain stretches chiefly south-west into the Congo basin. The Makraka (Makaraka), or "Cannibals," fully deserve their name, as is attested by Schweinfurth and other European explorers. But taken all in all they are decidedly superior to the surrounding Negro tribes. They are of a reddish black colour, with less flat nose and less prominent cheek-bones, and the facial angle more developed than those of their neighbours. The hair is long and almost silky, and by means of berries and various vegetable substances built up into the most fantastic forms. They do not yield the palm even to the Madi in this respect. They do not extract the incisors like the surrounding Negro tribes, but alone of all non-Mussulman peoples practise circumcision. They are accordingly regarded as a kind of Mohammedans, although they do not recognise Islam, and this semi-religious brotherhood is one of the reasons why the Egyptian governors choose them to recruit their troops; but the chief cause is the terror inspired in the other tribes by their courage and reputed cannibalism. The dealers traversing the country had often to fight not only the Makraka men, but the women as well. These Niam-Niam are skilful agriculturists and possess a considerable variety of plants. Although their territory is of small extent, it ranks from its material prosperity as the first amongst the surrounding nations, and one of the administrative departments established by the Egyptian Government is named after these people, although also comprising many other nationalities.

THE MURU.

The most widespread nation in the Yeï basin above the Denka country are the Muru, one of whose communities, carefully studied by Felkin, bears the name of Madi, like the large tribe on the banks of the Bahr-el-Jebel. Differing little from the Bari and Denka in usages, the Muru also go naked, seldom wearing any ornaments except iron rings. Their distinctive tribal sign consists of two tattoo-marks on the forehead. The stones heaped round their graves have the same form as the dolmens of Brittany. Owing to their physical strength, the Muru are employed as porters throughout the whole region of the Upper Nile tributaries.

They are also skilled tillers and gardeners, and each hut has in its vicinity an enclosure, where the vegetable beds, three feet high and very narrow, are so disposed that they can be cultivated without bending the back. The old Muru custom of all property being in common has not yet been completely replaced by private ownership. The beer prepared by the women belongs to everybody; it is placed in a public building, every thirsty native or traveller drinking at pleasure, but never taking it away or abusing the privilege, drunkenness being quite unknown. In fine weather all the people in the village, men and women, dine together, served by the children. Politeness is one of the virtues most sedulously cultivated by the Muru; the women are respected, and those amongst them who practise medicine, with much more success and intelligence than the men, are always escorted back to their own dwellings by the head of the family they have honoured with a visit. The education of the children is looked upon as the chief duty of the tribe. Boys and girls are trained to bow to and keep silence before their elders; they learn gymnastics, dancing, mimicry, practise games of strength and skill, accustom themselves to the use of arms, and make of their father a target for their blunt arrows. They are taken away and left in the woods, then watched from a distance to see how they find their way back to the village. Their education is completed by travel. At the age of ten the children leave the paternal roof on visits to distant friends of the same or other nations, thus making their "tour of the world," in order to become acquainted with the manners and customs of foreign lands. When the young women get tired of travel their brothers bring them home, then again set off on their ramblings. They also seek foreign wives, chiefly amongst the Niam-bara, exogamy being the rule in the Muru nation, although unknown amongst the Bari. When the young Muru finds a girl that takes his fancy, he approaches her and attaches a wreath of foliage to her wrist; if she retains this ornament the young man may hope, and the negotiations for the marriage are forthwith begun between the respective parents.

The chief station of the Muru is the village of *Madi* (*A-Madi*), on the left bank of the Yeï, and on the caravan route between Lado and Dem Suleïman, in the midst of vast sesame and millet-fields. It is one of the centres of traffic between the Nile basin and the Monbuttu country. The official reports record how many hundredweights of ivory are purchased by the Egyptian officials, but make no mention of a more important commercial article, namely, the slaves captured from the peaceful tribes of the country. Till recently Madi also forwarded a large number of eunuchs to the towns of the lower Nile and Arabia. It is stated that the slave-dealers always tried to capture and mutilate those chiefs who did not readily countenance their traffic in human flesh. Hence it is not astonishing that the sight of a "Turk" terrifies the blacks of these regions; the children on seeing a stranger scamper away with cries of terror.

The river Rôl, which under divers names flows parallel to the Yeï, and which at last runs out in the Nile marshes above the cataracts, flows through the territory of numerous tribes, such as the Abukaya, the Lori, the Lesi, the Belli, and the Jiri, which possess no political cohesion. In the country of the Agar, a branch of the

Denkas, there is a veritable town, *Ayak*, or *Dufalla*, standing on the right bank of the river and surrounded by a palisade and a deep ditch. The dwellings, all built on raised platforms, are crowded together within the enclosure, whilst the zeriba is surrounded by a complete zone of villages. North-west of *Ayak*, at some distance from the river, and in a hilly cultivated district, is situated another zeriba, founded by the Arab traders. This is the town of *Rumbek*, also called *Rol*, after the name of the river and its chief riverain tribe. It is the chief town of the Egyptian administrative Government. According to Felkin, the town population numbers about 3,000 individuals, and that of the neighbouring villages 30,000. In *Rol* dress is regarded as a religious privilege, and except the wives of the Arabs, no women have a right to be seen clothed.

THE BONGO.

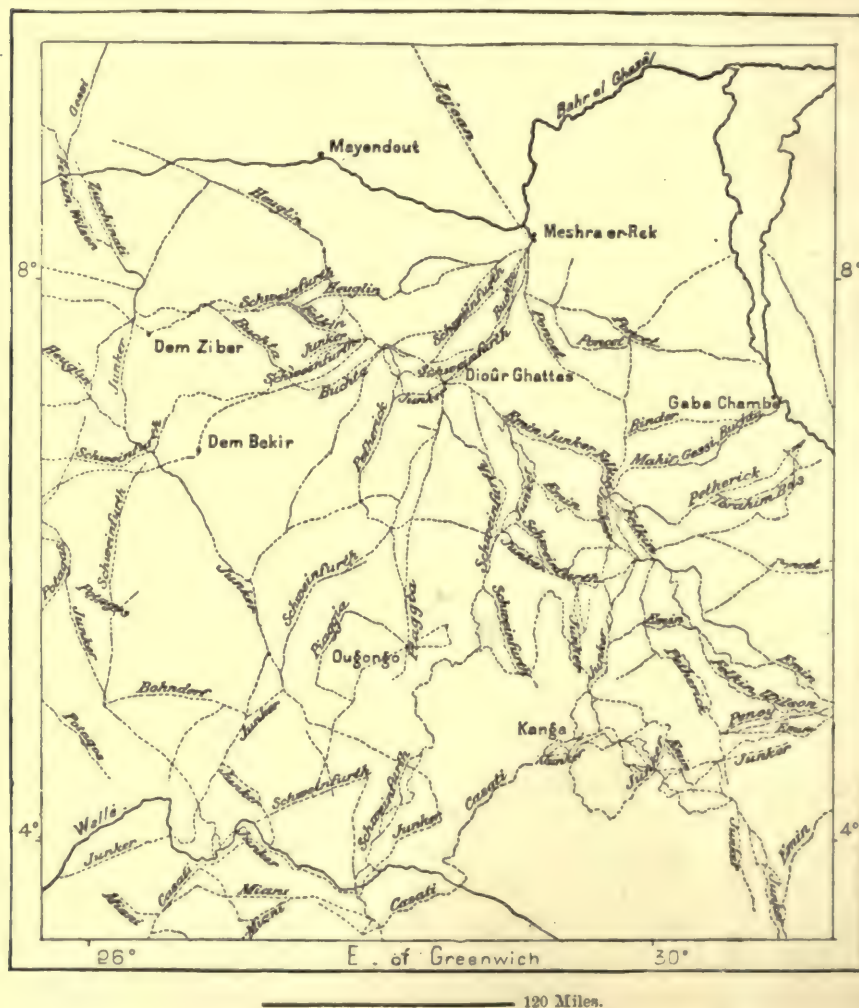
Towards the west, the great Bongo nation, also called Dor or Deran, occupy the hilly plains north of the Niam-Niam, watered by the Jau, the Tonj, the Jur, the Bongo, and their numerous affluents. Schweinfurth, who lived two years amongst the Bongo tribes, says that before the arrival of the slave-dealers they must have numbered at least about 300,000, but at present they appear to be reduced to 100,000. Formerly distributed in countless little independent communities, and living in peace with each other, the Bongos never thought of uniting to resist hostile attacks. When the slave-dealers presented themselves with their bands armed with guns, they easily gained possession of the villages on the plain, established their zeribas at all strategic points, and the whole country was soon at their mercy. The whole Bongo nation threatened to disappear in a few years, so rapidly was the country wasted by the slave-trade and oppression. The local civilisation perished, and certain industries were abandoned. Schweinfurth feared that this original people, so remarkable in physical traits and usages, might have been discovered only to be lost to science. It seems, however, that thanks to several years of peace, the country has begun to revive, although now again threatened by the raids of the Arabs and their native allies. The Bongo families appear to be fairly numerous, owing, perhaps, to their relatively late marriages: the young men marry only between the ages of fifteen and seventeen, whilst in other tribes unions take place at thirteen or fourteen.

The Bongo present a striking contrast to their northern neighbours, the Denka, although the two languages appear to point at a remote affinity. They are not so black, the skin being of a reddish brown, similar in colour to the ferruginous soil composing the terrace lands sloping northwards. Of smaller stature than the Denka, the Bongo are stronger and more thickset, the strong muscles of their thighs and calves presenting a marked contrast to the thin legs which give such a "stilted" appearance to the marsh tribes. The women have largely developed hips, and walk like animals, the tail they ornament themselves with, swinging about at each step, adding to the resemblance. Whilst the Denka head is narrow and long, those of the Bongo are all brachycephalous, the skull being nearly round.

According to Schweinfurth, no other people possess a higher cephalic index; it would appear moreover that in certain districts the mothers compress the heads of their children into certain shapes. Unlike so many other peoples of the riverain regions, the men do not go naked, but wear a strip of cloth, and the iron rings which they wear on the arms, occasionally numbering several dozens, are so arranged as to form veritable pieces of armour. The women wear no loin-cloth,

Fig. 36.—CHIEF ROUTES OF EXPLORERS IN THE ZARIBA REGION.

Scale 1 : 6,000,000.



merely attaching to the girdle a leafy branch or tufts of grass. Their ornaments consist of nails or metal plates, which they pass through the lower lip. Bongo women are often seen wearing, like the Botocudos of Brazil, inserted in the lip, a disc large enough to be used as a plate. The dandies also insert pegs into the sides of the lips, the nostrils, and other prominent parts of the body. Persons are seen thus "pinned up" in a hundred different places.

The Bongo are perhaps one of the most kindly, gentle, and industrious people of Africa. They are not possessed of the extraordinary passion for cattle which characterises the Bari and Denka, but occupy themselves mostly with agriculture, men and women alike preparing the soil and cultivating their plants with the greatest care. The fertile red soil yields abundant crops of tobacco, sesame, durra, and other alimentary plants; but in spite of this variety of vegetable products, including wild roots and mushrooms, the Bongo despise no flesh, fresh or putrid, excepting that of the dog. They drive away the vulture to regale themselves on the remains of its meal of carrion, eat with relish the worms found in the entrails of the ox, devour scorpions, termite larvæ, and all creeping and crawling insects. As amongst other tribes, earth-eating is also very common amongst them. The Bongo are the most skilled of African smiths, supplying the Denka with their arms and ornaments. They build ingenious furnaces to direct a current of air across the iron ore, and manufacture with the aid of very simple tools articles equal in finish to the products of the European workshops. Like the Logone people of the Tsad basin, they have introduced the use of round pieces of this metal as money. They are also skilful builders and carvers, erecting substantial dwellings with circular ledges, which serve as terraces or balconies. Round the graves of their chiefs they carve stakes in the form of human beings, which bear a striking resemblance to the divinities of the South-Sea Islanders. But these human figures of the Bongo are not gods, but merely symbols of the resurrection, a doctrine in which, together with metempsychosis, they are firm believers. The souls of old women are supposed to pass into the bodies of hyænas, on which account these animals are regarded as possible family relations, and never killed.

THE DIUR.

The Diur, that is to say, "Men of the Woods," "Savages," are so called by the Denka, who regard as inferior beings all tribes not possessing numerous herds of cattle. Their true name is Luoh or Lwo, and like the more southerly Belinda, who have encroached on the Niam-Niam domain, they are immigrants of Shilluk stock. They still speak an almost pure Shilluk dialect, and some of the aged amongst them have preserved the traditional system of tattooing peculiar to that nation.

The Diur occupy the last ferruginous terraces of the plateau between the Bongo and Dinka territories. Their domain is watered by several streams, the largest of which takes the name of this tribe. According to Schweinfurth, they number some 20,000, but increase rapidly in times of peace, because their families, remarkable for their mutual affection, are generally numerous. The Diur, much better proportioned than the Denka, are one of the naked peoples classed by the earlier explorers amongst the "tailed men," as they generally wear two attached to the girdle. Skilful smiths like the Bongo, they also manufacture rings for ornamenting the arms and legs, but they no longer dress the hair after the complicated Shilluk fashion. Nearly all the men and women have very short hair. The ancient

customs are disappearing. Thus, amongst others, the Diur have ceased to spit upon each other as a mark of affection; and the "tree of death," to whose trunk the heads of enemies were nailed, no longer stands at the side of each village.

TOPOGRAPHY.

Diur Ghattas, the principal zeriba of the country, is well placed at the junction of the Bongo, Denka, and Diur territories, and in the intermediate zone between the marshy plains and the hilly terraced lands, with their alternate woods and grassy steppes. Sixty miles to the north-east, at the Diur and Momul confluence, surrounded by a labyrinth of canals, and to the east of an immense forest, stands the village and the group of depôts called Meshra-er-Rek, or "Station of Rek." Here begins the navigation of the Bahr-el-Ghazal, and here is the starting-point for all the caravans proceeding south, south-west, or west, into the region of the Upper Nile tributaries. Before the war which cut off this region from Khartum, a steamer ascended the Bahr-el-Ghazal periodically as far as Meshra-er-Rek. North-west of Diur Ghattas, other zeribas follow in the Diur territory. Such are *Kuchuk-Ali*, where Gessi gained a final victory over the slave-dealer Suleïman, and where are some fine banana, lemon, and orange groves, planted by Schweinfurth; and *Wau*, on the left bank of the Diur, surrounded by extensive forests, which furnished the materials for the flotilla in which Gessi sailed down the Diur to the port of the Bahr-el-Ghazal.

THE SEREH, GOLO, AND KREJ TRIBES.

West of the Bongo are the Sereh and Golo, whose territories are both bounded by the Ji or Pango tribe. The Sereh greatly resemble their neighbours the Niam-Niam, to whom they were for some time subject. They are a well-built, stout, cleanly, and industrious people. They are of a cheerful disposition, enduring fatigue, hunger, and thirst without complaint. Of all Africans, they possess the fewest domestic animals, rearing poultry alone in their villages.

In general, the Golo resemble the Bongo in appearance and customs, although speaking an entirely different language. Their round huts have very large eaves supported on a circular row of posts, thus forming a complete verandah round the dwelling. They erect exceedingly elegant granaries in the form of a vase resting on a stool, and surmounted by a movable cover tapering to a point ornamented with plumes.

West of the Golo dwell the Kredi or Krej, who wander in small bands in the heart of the forests, and whom Schweinfurth describes as the most repulsive and least intelligent Negroes he ever met. This region, however, which drains through the Biri and other streams into the Bahr-el-Arab, is one of those where the populations have become most mixed, not by free crossings, but by promiscuous intercourse, forced migrations, and the passage of troops and slave-dealers. The whole of Dar-Fertit, a name usually applied by the Arabs to this part of the country, was recently little more than a camp of slave-hunters. The affix Dem or Dwem, meaning "town," joined to so many names of places, indicates the zeriba or fortified stations main-



GENERAL VIEW OF DEM SULEIMAN.



tained by the slave-dealers. *Dem Idris*, the chief town of the Golo country, is one of the great centres of the ivory trade. When Bohndorff, Juncker's fellow-traveller, escaped northwards towards the end of 1883, elephants' tusks were here heaped up in the stores. Had the river not been blocked by the revolt, Governor Lupton valued the merchandise that he could have forwarded to Khartum at 125 tons of ivory and 15 tons of indiarubber.

TOPOGRAPHY.

Dem Ziber, or *Dem Suleïman*, the chief town of the "Dwems," named after the two slave-dealers, father and son, whose power was overthrown by Gessi in 1878, is one of the largest places in the Nilotic basin above Khartum. The Egyptians have made it the capital of the province of Bahr-el-Ghazal. The king of Uganda's envoys on reaching this "great city" believed that they had arrived in England, of whose wealth and wonders they had heard so much. Its stores are stocked with European merchandise as well as with local produce, exotic fruits and vegetables acclimatised in the surrounding gardens. Here jewellers have established themselves, and sculptors here carve ivory tastefully as bracelets, sword and dagger hilts, and many other articles of vertu, and manage to keep within the law which claims elephants' tusks as the Khedive's property. *Dem Suleïman* is the only town of the riverain countries possessing a mosque.

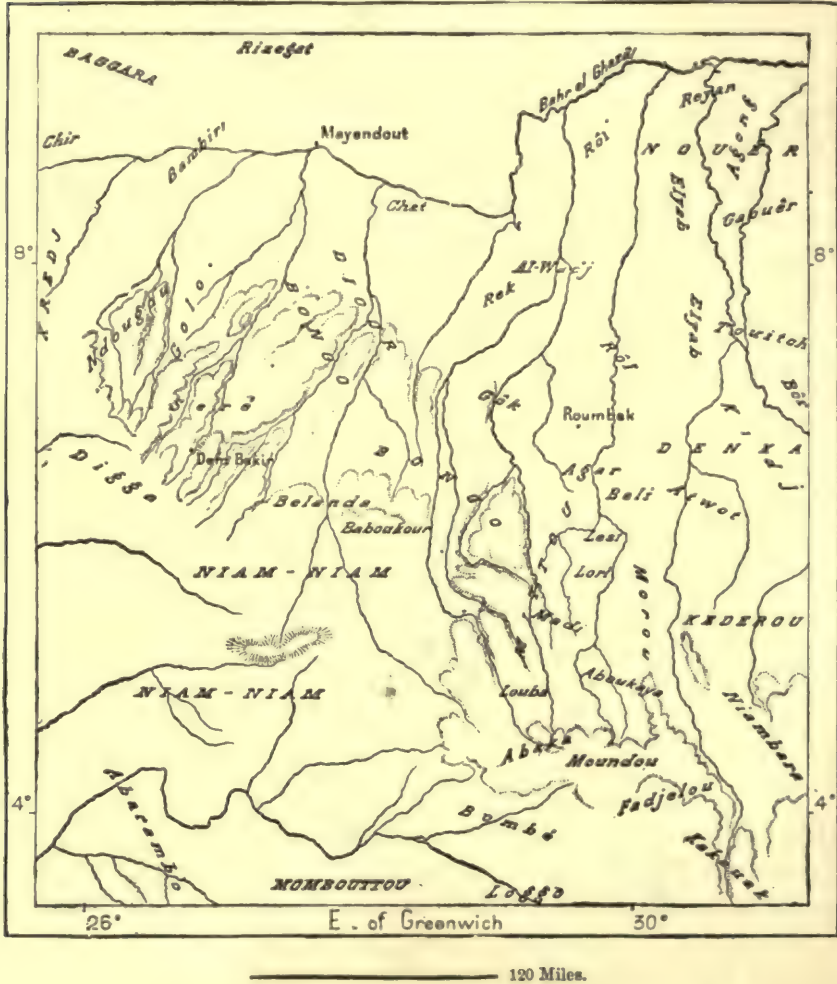
To the north of Fertit, Gessi chose as the garrison station on the Arab frontier the town of *Hiffi*, situated in the vicinity of large forests near the sources of the streams flowing towards the Bahr-el-Arab, but which run quite dry during a part of the year. The *Togöi*, one of the neighbouring tribes, belonging probably to the same race as the *Krej*, are savage, ugly, and debased; whilst other peoples, such as the *Inderi* and *Shir*, have features which, according to Felkin, are almost "European," and are distinguished for their high moral qualities. The village of *Gondu*, about 24 miles north of *Hiffi*, is a citadel of the *Shir*, perched on the top of a hill rising some 300 feet above the plain; a rough path winds up the side of the hill, which, however, the Arab invaders have vainly attempted to scale. The *Shirs*, with no other weapons than arrows and stones, have always repulsed their assailants. Having remained independent and retained their bravery, they have lost nothing of their good qualities. At the sight of a stranger they leave their work and run forward, offering him refreshment and food. The *Shir* have little of the Negro type, their lips being thin and the nose shapely. They daub the body with oil and red ochre, which gives them a resemblance to their namesakes, the *Shirs* of the Nile Valley. Like the *Madi* and so many other peoples of the Upper Nile region, they pass a great part of their life in dressing their hair. Their favourite shape is that of a halo composed of long tresses.

The *Mandara*, or *Mandula*, north of the *Shirs* in the direction of the *Baggara* Arabs, form the most advanced section of the Negro populations. According to Gessi, they are immigrants from *Baghirmi*, near Lake Tsad, who, flying from the slave-traders, took refuge in a country which, however, had been most devastated by

the slavers. It was a hunting-ground where the Sultan of Darfur formerly hunted human beings to pay his debts. The Mandaras are nearly all Mahommedans, like their neighbours on the banks of the Bahr-el-Arab. They have allied themselves with the Baggara and Nuer to attack the Egyptian garrisons in the riverain

Fig. 37.—INHABITANTS OF THE ZARIBA REGION.

Scale 1 : 6,000,000.



countries, but they were repulsed many times by Governor Lupton near the village of Mayendut.

The Fertit country forms the ethnological boundary between the clothed and naked populations. This contrast, combined with those of the physical features, impresses travellers, who here seem to enter a new world. To effect its junction with the Bahr-el-Ghazal and Nile, the "River of the Arabs" in its lower course winds across Negro territories. Denka tribes and peoples of the great and warlike Nuer nation occupy the swampy plains along its banks.

THE NUER.

Of all the African peoples, the Nuer best deserve the term of "stilted," applied to the inhabitants of frequently inundated districts. Resembling the Denka in this respect, they possess even longer legs and flatter feet, which they raise above the high grass and place cautiously on the boggy ground. Like most Negroes of the riverain countries, they go naked; clothes would greatly incommode them in these damp regions. But they take great pride in the beauty of their hair, giving it a yellowish tint by applying cinders and other substances. Those who have short hair wear wigs of cotton dyed red; they make incisions on the forehead, while the young women pierce the upper lip, inserting rods two or three inches long encrusted with glass beads. Like the Denkas, the Nuer, whose fields are above the flood level, possess large herds of oxen; their most binding oath is taken on the breed of their cattle. There are also a few Nuer communities living in the midst of swamps on the floating islets of grass and reeds brought down by the river during the floods. Like the aquatic birds, they eat fish as well as roots and nelumbo seeds. Still all travellers have wondered how these half amphibious beings can settle down and bring up their families in the midst of mud and decaying vegetable substances. Their life must indeed be a hard one. They are in general very sullen, strangers rarely receiving a gracious reception from them.





CHAPTER V.

SOBAT AND YAL BASINS.



THE Sobat, supposed by certain explorers to be the true White Nile, is occasionally even superior in volume to the main stream. It receives the drainage of an extensive basin, roughly estimated at 70,000 square miles. This vast space is still a blank on the map, or exhibits little more than the names of tribes inserted merely on the authority of the natives and of travellers who have penetrated farthest into the interior. Debono ascended the river in a boat for over 80 miles, while a steamer advanced 140 miles beyond the confluence. Antoine d'Abbadie, Beke, and recently Schuwer, have explored several tributary valleys on the western watershed of the Abyssinian highlands, and have, moreover, collected information from the Arab dealers and natives. The Yal, or Jal, which rises in the Anam and Berta highlands under the names of the Yavash or Kishar, that is "Great River," is even less known in its middle and lower course than the Sobat. The Arab traders call it the Sobat, like the much larger river flowing farther south. Its mouth is blocked by sand only during exceptionally dry seasons, such as that of 1861. Between the Yal and the Blue Nile, for the space of more than five degrees of latitude, the White River receives only one perennial affluent. The Nile and its two tributaries are fringed by deleb palms, tamarinds, ebony, and huge acacia forests, which though rich in gum are at present used only for the sake of the wood. One of these acacias is the "coftar" or flute-tree (*acacia fistula*), whose ivory-like branches are drilled with holes by the insects living in the gall-nuts with which they are covered. The wind rushes through these openings, producing a soft mellow sound like that of the flute. These forests gradually disappear towards the mouth of the Yal, where the bare steppe stretches right and left, relieved only by the smoke of a few Arab camping-grounds.

THE GAMBIL AND KOMA TRIBES.

Most of the inhabitants of the Sobat basin are of Negro stock, the Gallas being met only in comparatively small isolated communities. The first plains watered by the Baro and Garreh affluents on leaving the Abyssinian mountains are occupied

by Denka and other tribes, who have sought refuge at the foot of the hills against the slavers of the lower Sobat. These fugitives have intermarried and formed new tribes differing little from the original stock. The level plains, watered by the Bako, are inhabited by the Yambo or Gambo, whom d'Abbadie believes to be a branch of the Shilluks, while Schuver affiliates them to the Denkas. Farther on the land rises into plateaux inhabited by the Kirims, Malas, Ishings, and Matze Maleas, said to be of Negro origin. One of these tribes is said to consist of dwarfs not exceeding 4 feet 7 inches in height.

A community of the warlike Gambil people recently occupied the skirts of the vast Wallega forest fringing the western foot of the Abyssinian highlands, under the same latitude as the Nile and Sobat confluence. The chief river traversing their territory to join the Sobat, they named the Komanji, or "Cow River," because their herds, during the dry season, finding no pasturage except on its banks, crowded down to the water's edge. To call down rain the Gambil used to throw a flayed cow into the stream, believing that the farther the blood spread, the more copious would be the rainfall. They were one of the Nilotic Negro nations most remarkable for their bodily strength. Their distinctive tribal signs were two gazelle or goat horns fastened to the forehead, and they were also accustomed to extract the two incisors of the lower jaw. But of this tribe there are now very few left, the exterminating wars created by the Egyptian "civilisers" having extended even to the plain of Komanji. Robbed of their cattle by the Arab traders, the Denkas of the Nile fell upon their Gambil neighbours to restock their farms. A ruthless warfare, waged for the purpose of plunder, ensued between the two nations, in which the Gambil were defeated. Some fled eastwards to the upland Abyssinian valleys, and sought refuge with the Legas, a Galla people, who received them merely to reduce them to slavery. Others escaped to the south, a few only still wandering about their native plains. Their capital, *Komanjok*, is nothing but a ruin, like their old market-town *Kepiel*, where the Legas bartered their metal wares and glass trinkets.

Better protected by their mountains, the Komas, occupying the north-east portion of the former Gambil territory, south of the Upper Yal affluents, still form a considerable nation. The Arabs have as yet visited them only in the character of merchants, and the "Turk" is not sufficiently known to be feared. The Komas are, moreover, a peaceful nation, having been undisturbed by wars for some centuries. Having no need to defend their country, and never making slave raids against their neighbours, they are bad archers. But though they do not distinguish themselves as warriors, they are skilful agriculturists, and their fine crops of igname and cereals are more than sufficient to support the people. They barter the wild honey abundantly furnished by their forests for iron, salt, and other articles.

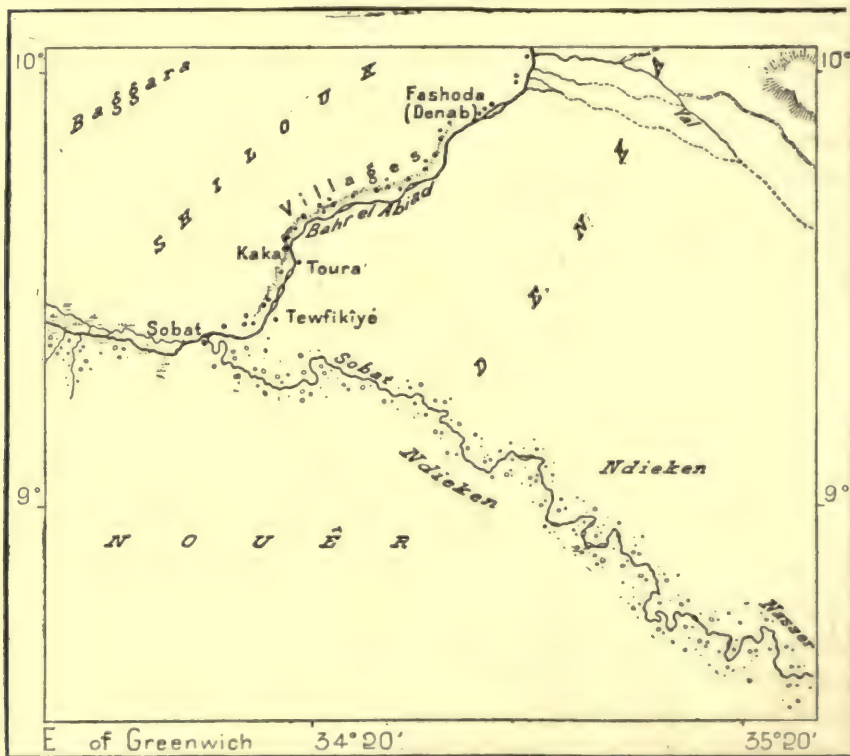
The Koma mountains, about 6,660 feet high, are one of the most pleasant regions in the whole of Africa, enjoying an equable climate, not too warm, and never so cold as to necessitate the wearing of heavy garments. The sloping land is extremely healthy, and the picturesque hillocks, verdant valleys, and limpid streams on every side combine to form a charming landscape. The huts scattered

amongst the trees are a proof of the general security from the attacks of enemies or beasts of prey. In his many voyages across the world, Schuwer nowhere found men whose simple pleasures, quiet life, and mutual kindness seemed to bring them more in harmony with the surrounding country. The Koma communities never quarrel with each other, and no jealous authority prevents the families from acting as they please; the people are guided by the opinion, and in important matters by the decision, of a public meeting.

The Komas extract the upper incisors. The men go naked, like most of their neighbours, but some wear a collar or necklace of teeth or pearls. From their

Fig. 38.—CONFLUENCE OF THE SOBAT AND YAL.

Scale 1:2,000,000.



childhood the women are clothed with bark or cloth; engaged and married women mostly wear an apron embroidered with pearls and rounded pieces of broken ostrich eggs. The women, moreover, ornament themselves with red pigtailed of hair or vegetable fibres, with which they scourge themselves when mourning for the dead. Their cries and sobs are heard almost every morning, even before cock-crow. The dead, men and women alike, are kept over a period of seven to ten years in special huts, built so as to protect them from the ants, the relatives and friends occasionally bringing them presents of salt or pearls. But when the bones are buried all these gifts are sold by auction to defray the expenses of a public feast.

The upland valleys of the Yal, north of the Koma, belong to the Amam, whom Mateucci wrongly terms the African "Patagonians." They are certainly tall, but not so tall as the Nuer and Kij; but they have so successfully repulsed the Egyptians that they are described as giants and reputed cannibals. Their customs resemble those of the Komas.

The Suro, who roam on the border of Kaffa south of the Gambils, are said to be tributary to the latter state. They have already been brought into the circle of Abyssinian political influences. Like all the tribes plundered by the Abyssinians, they are called "Shangalla" by the plateau populations; but this designation implies no connection with the Shangalla of the north, such as the Bazeh. Although frequently visited by the Arab merchants, the Suro are still wild pastors, like the Shilluks. They go naked, excepting the women, who wear a narrow loin-cloth; the chief alone wears garments, the insignia of power. Like several Nilotic Negroes of the same race, the Suro extract two teeth from the lower jaw, and insert a disc of wood in the lower lip. They also pierce and thrust blades of grass through the lobe of the ear. Like their civilised neighbours of the plateau, they eat no other flesh but that of their herds.

The riverain peoples of the lower Sobat, although bearing various tribal names, all belong either to the Nuer or Shilluk family. The formidable Gibhas, Bonjaks, and Mivaks are isolated Shilluk communities; while the Baloks, settled more to the west, and the Ndiekens lower down, are Nuers. Lastly, the populations of the lower valley, near the confluence, are Shilluks separated from the main body of the nation only by the breadth of the Nile. The Egyptian Government had formerly established the military post of *Nasser* on the Sobat, about 120 miles above the confluence; but the expenses of maintaining it not being covered by the small trade, and the land being of little value, it was abandoned in 1876. At present the vast unexplored basin is claimed neither by Abyssinia nor Egypt, and its political system is in the fragmentary and shifting state produced by the continual displacement of the tribes by emigration or by conquest. But these unexplored regions traversed by the Upper Sobat and its affluents, will doubtless become one of the most frequented parts of Africa, as it is here that the water-parting between the White Nile and the Indian Ocean can be most easily crossed. The border range between the Kaffa mountains and the volcanic highlands of the Masai country is partly interrupted by broad openings, at present occupied by fierce Galla tribes, and forms a natural communication between the watersheds.

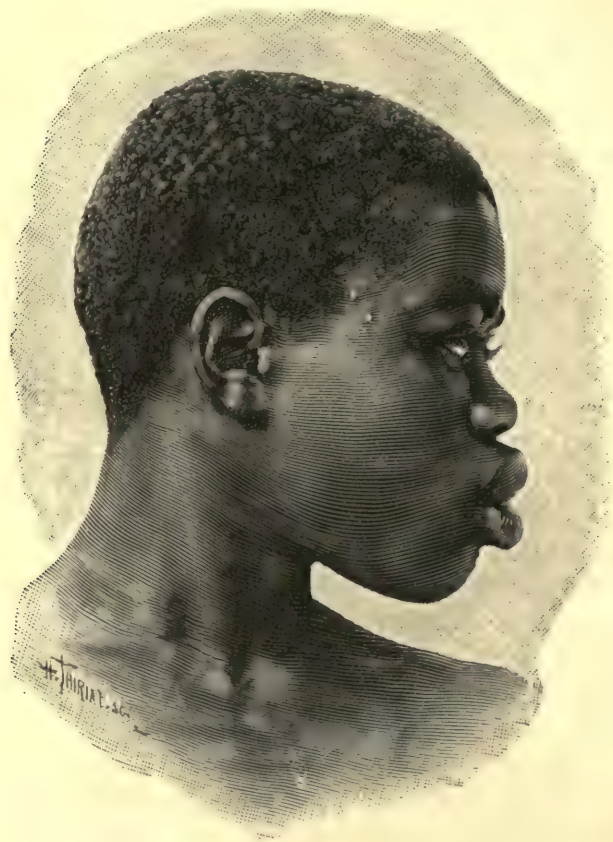
THE SHILLUKS.

The Shilluks, who occupy the left bank of the Nile from below the Sobat junction to Abha Island for a distance of over 360 miles, are one of the largest African races, and the only one on the banks of the Nile recognising a *bando*, or king, ruling all the tribes, and selling as slaves those whom his anger or justice lights upon.

The riverain zone inhabited by the Shilluks is only from ten to twelve miles broad, the plains of the interior being occupied by the Baggara (Bagara), or "Cattle Arabs," pure or mixed, so called on account of their large herds of cattle.

They possess none of the gentleness of their animals, however, being wild and daring horsemen, much feared by their neighbours the Shilluks. According to the rough census taken by the Egyptian Government in 1871, after the reduction of the land, the Shilluk nation is one of the most numerous in the world in proportion to the surface of the cultivated land. It possesses about three thousand villages, each containing from fifty to two hundred families, and the whole nation comprises a total population of at least one million twelve hundred thousand, a density only to be equalled in the suburbs of European industrial towns and districts. There

Fig. 39.—SHILLUK TYPE.



are few other countries where nature provides so abundantly for all the wants of man. The towns on the bank follow in succession at intervals of less than half a mile, like one huge city. Seen from the river, these collections of huts, all similar in form, resemble clusters of mushrooms, the white cylinder of the building topped by a spherical grey roof heightening the illusion. In the middle of each village is a circular open space, where the villagers assemble in the evening, and seated on mats or ox-hides, smoke native tobacco in large pipes with clay bowls, and inhale the fumes of the fires lighted to keep off the mosquitoes. To the trunk of the tree standing in the middle of this square are hung the drums, so that the public

criers may immediately warn all the peoples of the surrounding towns in case of alarm.

Hartmann and most other explorers of this region of the Nile consider the Shilluks as the typical representative of the group of Negro nations whose domain is bounded south by the Bantu, east by the Galla and other Ethiopian races, north by the Nubian and Arab tribes, and south-west by the Niam-Niam. The Shilluks are, moreover, by far the most numerous of these groups, and have migrated most frequently to all the surrounding regions. They are said to have come from the south-east plains watered by the Sobat affluents; since the migration, the Luoh and Diur, a branch of the same stock, have occupied a portion of the south-west territory between the Bongos and Denkas. Other of their colonists have even crossed the Somerset Nile and settled in the U-Nyoro country, under the name of Chefalu; they are now colonising along the right bank of the Nile below the Sobat, the districts of the Denka country wasted by the slavers. The population on both banks was described by Werne as "immense," "incredibly dense;" even on the right bank, although the least crowded, hundreds of Denka villages followed each other at short intervals. But they were all delivered to the flames, this region having been completely wasted in 1862 by Mohammed Her, the chief of a band of adventurers, who had allied himself with the Abu-Rof Arab tribe occupying, west of Senaar, a large tract between the two main streams. The Abu-Rof, stationed along the foot of the hills, drove the Denkas towards the Nile and Sobat, where the slave-boats were in readiness. The razzia was successful, not a soul escaping, and a district several thousand square miles in extent was thus depopulated. Gordon's regret at having contributed to spread the "benefits of civilisation" in these countries may easily be understood. "We want neither your pearls, your friendship, nor your protection; we only ask you to leave us," were the words addressed to him by the delegates of a tribe he was annexing to Egypt.

Although for some time in contact with the Arab Mussulmans, the Shilluks have preserved their customs and religion. Like the Bari and Denka, they have refused the garments offered them by the Khartum merchants, accepting nothing but their glass or metal trinkets; the women alone wear a calf-skin attached to their girdle. Instead of clothes, the poor besmear themselves with ashes, and are thus recognised at a distance by their grey colour, the real complexion of the tribe being ruddy. Like other riverain populations of the White Nile, the Shilluks ornament their hair with grass and feathers in the most fantastic forms, such as that of a crest, a fan, a halo, a helmet, or even a broad-brimmed hat. At sight of Schweinfurth wearing a broad felt hat of the Panama type, the natives thought he was one of their tribe, and shouted with wonder when he took off his hat. The future form of the headdress depends mostly on the fancy of the mother. Before the children are weaned they fashion the hair with clay, gum, manure, and ashes, leaving its future care to the children themselves.

The Shilluks are skilled hunters like the Baggara, not only chasing but even breeding the ostrich in their villages. The animal they fear the most is the buffalo. When unable to evade the furious beast, they throw themselves face

downwards on the ground and sham death; the buffalo sniffs round the body for some minutes and then goes away without touching it. The Shilluks believe in the supernatural, but pay little attention to it. They worship an ancestor whom they consider to be both a god and the creator of all things; they invoke the spirits of the stream and wash in its holy water, but only in fear and trembling speak of the spirits of the dead, which hover in the air and pass into the bodies of animals and trunks of trees. The throne does not pass in direct descent from father to son, but to the sister's child or to some other relative on the female side. Until the new king has been proclaimed the corpse of his predecessor remains enclosed in his tokul; his daughters are forbidden to marry, and confined in a village set apart for the purpose.

TOPOGRAPHY.

The town of *Fashoda*, established by the Egyptian Government in 1867, as the capital of its province of Bahr-el-Abiad, is in Shilluk territory. Although the residence of the Shilluk king, it was at that time the village of *Denab*, a mere group of straw huts; it is now an imposing square fortress surrounded by palings, depôts, and enclosures; but at the beginning of 1884 it was a city of the dead, the war having caused the people to quit their dwellings. Here the Egyptian Government used to send those condemned to perpetual exile. Fashoda occupies a good strategic position on the left bank of the Nile, at the great bend which it describes in its northern course beyond the Bahr-ez-Zaraf and Sobat junction. The confluence itself is defended east by the post of *Takufikiyah*, so-called in honour of the Khedive, and west by the village of *Sobat*, established officially with a view to overlook the Negro slave-dealers. *Kaka*, recently the chief slave market of the Upper Nile, is the most important place in the Shilluk country; it lies on the left bank of the river, near the northern frontier.





CHAPTER VI.

ABYSSINIA (ETHIOPIA).

THE name "Ethiopia," like so many other geographical terms, has changed in value during the lapse of centuries. Like Libya, it was once applied to the whole of the African continent; it even embraced a wider field, since it included India and all the southern lands of the Torrid zone occupied by the "men blackened by the sun," for such is the exact meaning of the term. "The peoples of Ethiopia, the most remote in the world," says Homer, "dwell some towards the rising, others towards the setting sun." The "wise men" occupying the Upper Nile, of whom the Macrobian, or "Men of Long Life," are a branch, whose manners and customs pertain to the Golden Age, and "those virtuous mortals whose feasts and banquets are honoured by the presence of Jupiter himself," are called Ethiopians by Herodotus. But he applies the same term to the western Negroes, whose culture was scarcely superior to that of irrational beasts. However, according as our knowledge of Africa increased, the term Ethiopia became less vague, and was applied to a region of smaller extent. Now it is restricted to the uplands forming the water-parting between the Red Sea, the Gulf of Aden, and the middle Nile. This is the region known to the Arabs by the name of Habesh, or Abyssinia, a term supposed to denote a mixed or mongrel population, hence reluctantly accepted by natives acquainted with Arabic. The people occupying the plateau traversed by the Blue Nile and other large Nilotic affluents, conscious of a glorious past, proudly designate themselves as "Itiopiavian," that is, Ethiopians. Nevertheless, the term Abyssinia, like that of Germany, and so many others that the people themselves did not give to their country, has acquired amongst foreigners the force of custom, and must be employed to avoid misunderstandings.

RELIEF, EXTENT, POPULATION OF ABYSSINIA.

The shiftings of frontier caused by the fortunes of wars and conquests have long prevented, and still prevent, these terms, Ethiopia or Habesh, from conveying a clear political signification. Now applied merely to the lofty chain of mountains whose central depression is flooded by Lake Tana; now extended to all the sur-

rounding lands westwards to the Nilotic plains, and eastwards to the shores of the Red Sea, in its ordinary usage the term Abyssinia is specially employed in a political sense, its limits being indicated by the authority of the "King of Kings."

The word Ethiopia has a still wider sense. From the geographical standpoint its natural frontiers are traced by the elevations, which at the same time serve as boundary lines between the surrounding floras, faunas, and populations. Speaking generally, the whole triangular space, rising to an elevation of over 3,000 feet, between the Red Sea and the Nile, may be called Ethiopia proper. On all sides the exterior escarpments of the plateau indicate the zone of transition between the Ethiopian and surrounding lands. To the north they consist of those spurs projecting to the neighbourhood of the Red Sea, from which they are separated by a narrow strip of coastlands. Eastwards the rugged Tigré, Lasta, and Shoa highlands are abruptly limited by uneven plains stretching seawards, which appear to have formerly been partly submerged. Wadies and marshes skirt the foot of the hills, like those channels which encircle the foot of recently upheaved rocks. To the west the declivities are less precipitous; the highlands, breaking into ridges and headlands, fall in successive stages merging at last in the undulating plains, but reappearing here and there in isolated crags and masses in the midst of the alluvial strata. To the south the natural boundaries of Ethiopia are less distinctly defined, the plateau extending in this direction towards the uplands of the Masai country. Still, depressions are known to exist in this region affording easy communication from the Nile Valley through the Sobat to the lands draining through the Juba to the Indian Ocean.

Until these little-known regions have been thoroughly explored, it will be impossible to accurately calculate the extent of Ethiopia in its wider sense. All we know is that, in their present political limits, Abyssinia and Shoa cover an area of about 80,000 square miles, or considerably less than half that of France. The Kaffa country and part of the region occupied by the Gallas and other tribes, as far as the water-parting between the Sobat and Juba, should be added to these countries as natural geographical dependencies. The lowlands, ancient political dependencies of the kingdom of Ethiopia, extend east of the Abyssinian mountains towards the Red Sea and the Gulf of Aden over an area nearly equal to that of Abyssinia properly so-called. The whole of the region comprised between the Nile, the Takka steppes, the seacoast from Suakin to Zeïla, and the irregular water-parting between the basins of the Awash, the Blue Nile, the Sobat, and the tributaries of the Indian Ocean, has a superficial area exceeding 240,000 square miles. Its population may be approximately estimated at about 9,000,000.

HISTORIC RETROSPECT.

Separated from the surrounding countries by the relief of its plateaux and mountains, Ethiopia also differs from them in its climate, vegetation, fauna, inhabitants, and history. In this vast continent, where the people elsewhere intermingle like the waters of the sea, it rises like a vast highland citadel, constituting a world apart.

The Abyssinians have had an historic evolution different from that of the nations surging round the foot of their highlands, like the waves dashing against the cliffs. Wars and revolutions have been developed below them without affecting them. But if Ethiopia seems to have lived an independent existence amid its African neighbours, it offers on the other hand a development singularly analogous to that of temperate Europe. It is very remarkable that the Abyssinians alone, of all other African peoples, should have accepted and retained a religion which prevails under divers forms amongst European peoples. Not only its religious dogmas, but also its political institutions and usages, present a certain resemblance to those of mediæval Europe. In certain respects Abyssinia is an African Europe.

But for many centuries the relations between Ethiopia and the countries north of Africa have been few and transitory. The Greeks were not brought into contact with the Abyssinian highlanders till the time of the Ptolemies, when the open ports on the neighbouring coast facilitated the exchange of merchandise and the propagation of the Hellenic religion, as is attested by the inscriptions found by explorers in many parts of Ethiopia. Christianity and its predecessor, Judaism, were introduced into the country by the same routes. Numerous traditions have survived from the period of Greek influence, and at the present day Ethiopians, the statements of travellers notwithstanding, are still inclined to believe that the Greeks are the most powerful nation in Europe.

Shortly after their conversion, however, all relations ceased between them and the Byzantines, and it was through the Arabs that vague reports reached Europe of their African co-religionists. Even at the time of the Crusades a report was circulated that the King of Ethiopia was coming to the help of his Christian brethren. However, the statements made about these African Catholics were more legendary than historical, and Ethiopia, like the Mongolian plateaux, was supposed to have its "Prester John," under whom the happy populations were said to live in a second Golden Age. For nearly a thousand years all direct intercourse between Europe and Ethiopia was suspended, and not resumed till about 1450, through the trade opened by the Italians with India. If Bruce is to be credited, the Venetian Brancalione held theological discussions with the Abyssinian priests about the middle of the fifteenth century. Later on a Portuguese, Pedro Covillão, accompanied by a second Brancalione, succeeded in reaching the plateau and the court of the Ethiopian king in 1487; but he was not permitted to return to his own country. At the same time Marcos, an Ethiopian pilgrim, journeyed from Jerusalem to Lisbon. In the following century the Portuguese penetrated to the plateau, where they founded religious and military establishments in every direction. Relations with Europe, however, were not yet thoroughly cemented, when the Portuguese priests were accused of aspiring to political power and expelled from the country. They were no doubt followed in 1699 by the French physician, Poncet, invited by the King of Abyssinia to his court.

MODERN EXPLORATION.

But seventy years passed between Poncet's short visit and that of the Scotchman Bruce, with whom begins the era of modern exploration. Since his time the country has been traversed by many European travellers, naturalists, traders, adventurers, soldiers, and missionaries, and European military expeditions have even been made into the heart of Abyssinia. Commercial relations are rapidly increasing, and many of the plateau districts have already been pointed out by explorers as a future field of emigration for Europeans. But it might be doubted whether the two races would continue to live on friendly terms, without the conflicts and wars of extermination generally preceeding the fusion of different peoples.

Certain parts of Ethiopia are already much better known than any other African region lying beyond the colonies and maritime regions under European influence. Since Bruce's visit, the country has been thoroughly studied by explorers, such as Salt, Rüppel, Rochet, Ferret, and Galinier; Beke, Sapeto, Krapf, Combes, and Tamisier; Lejean, Munzinger, Raffray, Rohlf, and Heuglin, who have brought back maps, charts and observations of every description. Moreover Antoine d'Abbadie, during his twelve years' stay in Ethiopia, made a geodetic survey of the country, by a rapid but accurate method, hardly inferior in precision to the lengthy and delicate system of triangulation usually adopted in Europe. On d'Abbadie's map the Red Sea coast is connected with the mountains of the plateau as far as Kaffa by a continuous series of triangles, fixing the latitude and longitude of about nine hundred points. The map is covered with a close network of geodetic lines and routes, the names of many localities being inserted with considerable accuracy. Detailed surveys were also taken by the British staff officers during the expedition of 1868 from Adulis Bay to the highland fortress of Magdala.

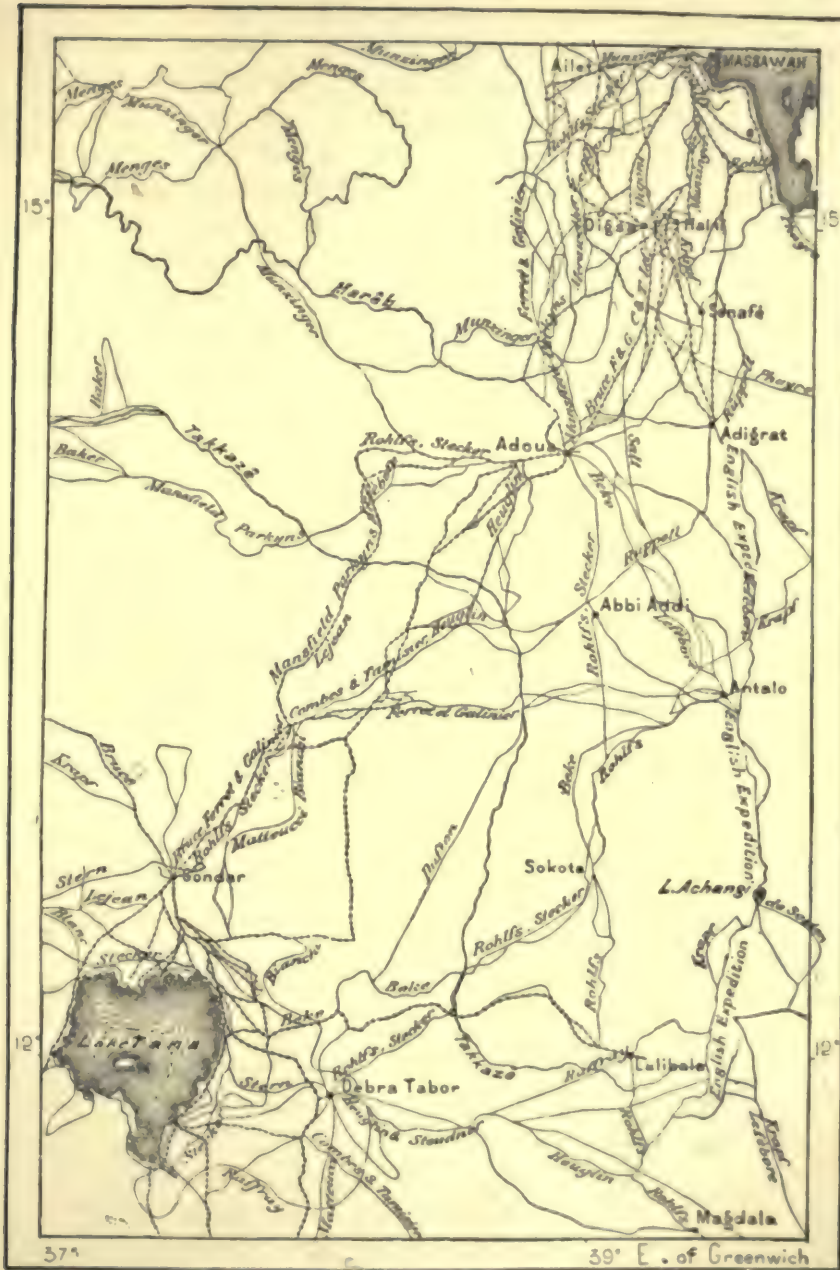
ABYSSINIA PROPER.

Most European explorers who have visited the Ethiopian uplands have penetrated from the east, where these highlands present the most imposing aspect. Above the *samhar* or *mudun*, a naked plain separating the coast from the plateau, the outer terraces of the escarpment are seen piled up in domes and pyramids, barren rocks or verdant slopes, whose sharp hazy crests seem to merge in a single irregular range. At the mouth of the ravines which cleave the rocky masses with their parallel furrows, the argillaceous plains are succeeded by rolled stones and boulders, with here and there a solitary tree, or patches of scrub or herbage visible in the cavities occasionally flooded by the tropical rains. Still higher up rise rocky or wooded slopes and steep precipices, round which wind narrow and dangerous paths. When the traveller at last reaches the summit he does not find himself on a ridge, as he might have expected, but on almost level pasture-lands interspersed with tall juniper-trees. At a height of from 7,000 to 9,000 feet the edge of the plateau stands out in relief, on one side overlooking the grey

and naked plain, and on the other, the strange "chess-board" of the interior with

Fig. 40.—CHIEF ROUTES OF ABYSSINIAN EXPLORERS.

Scale 1 : 3,000,000.:



Itineraries of Antoine d'Abbadie.

60 Miles.

its irregular terrace-lands overtopped by jagged cliffs and cleft asunder by deep gorges.

THE ABYSSINIAN PLATEAU.

On the whole, the Ethiopian plateau consists of numerous distinct table-lands, like the polyhedric prisms formed by the dessication of the clayey soil of plains exposed to the action of heat. These table-lands, intersected by precipices and surmounted by crags, stand at different elevations. Some of them form entire provinces, with towns and numerous populations; others, the so-called *amba*, are mere blocks or quadrangular masses some 800 or 1,000 feet high, similar to the *drugs* or "inaccessibles" of Southern India, or the isolated crags of Saxon Switzerland. In eastern Ethiopia the origin of these ambas is doubtless due to the disintegration of a thick layer of red or greyish sandstone, cleft into vertical masses, and revealing here and there stratas of lower schistose and crystalline formations. In the interior, and especially towards the west, where volcanic lands prevail, most of the natural cliffs consist, not of sandstone, like those of the eastern plateaux of India and of Saxony, but of lava, and terminate in basaltic columns, some disposed in converging clusters or else forming colonnades like the temples of the Acropolis. These crystalline rocks, whose upper terrace is large enough to contain arable tracts and form the source of rivers, have for the most part served as strongholds, where many a tribe or horde of robbers has remained for years besieged and cut off from the rest of the world. Other ambas have been chosen by the monks as the sites of their monasteries, and such holy places often serve as sanctuaries to those fleeing from justice or oppression. Lastly, the smaller basalt columns are frequently used as prisons for the great personages who have incurred the displeasure of the reigning sovereign.

In Eastern Ethiopia the general face of the plateau is more broken and cut up into more secondary plateaux and crystalline rocks than in the west. The escarpments of most of the isolated mountain masses slope more gradually westwards. They thus reproduce in miniature the general aspect of the whole region, which terminates abruptly towards the Red Sea, and slopes gradually towards the Nilotic plains. This general incline, however, can only be determined by accurate instruments, the aspect of the plateau and of the surrounding ranges being too irregular to enable the observer to detect its primitive outline. The ambas stand out at various elevations in bold relief against the blue sky like citadels and towers. Lower down, the verdant base of the plateau breaks into abrupt precipices, whose walls present from a distance the aspect of regular quadrangular lines. On these harder rocks rest the soft foundations, here scored by avalanches of falling rocks, elsewhere clothed with verdure. The Abyssinian landscapes, like those of the Rocky Mountains, consist of superimposed terrace-lands and vast strata of monumental aspect. Near Magdala the eastern edge of the Talanta plateau is said to terminate abruptly in a vertical wall of basaltic pillars over three thousand feet high.

THE Kwallas and River Gorges.

The height of the Ethiopian plateaux varies greatly, presenting between the Simen range in the north and those of Lasta and Gojam in the south-east and

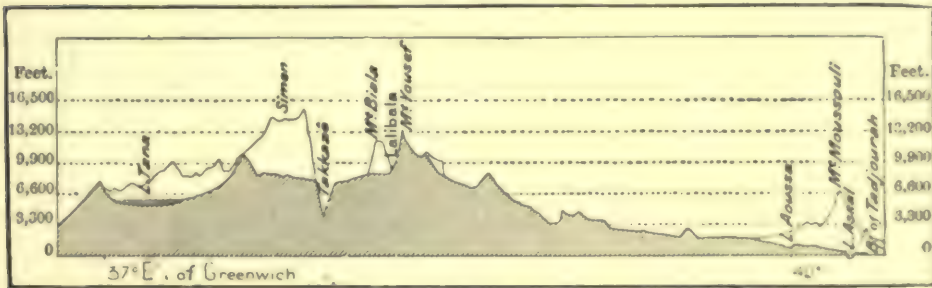
NORTHERN ABYSSINIA.



west, a mean altitude of about 8,000 feet. All the regions attaining or exceeding this height are called *dega*, a term analogous to the Persian *sarhad* and Arab *mej*. Below the altitude of 6,000 feet, the intermediate valleys and gorges dividing the plateau, excavated by the mountain torrents to various depths, take the name of *kwalla*, *kolla*, or *kulla*, a zone of "hot lands" corresponding to the *ghermis* of Persia, or to the *tehamas* of Arabia. Between these two zones stretches the *coina-dega*, or temperate region. In many places the rugged escarpments present a sudden contrast between the degas and the kwallas, the difference of their relief being heightened by that of their climate and vegetation. The cataracts, such as that of Davezut, near Debra-Tabor, fall either in a single sheet or through a succession of rapids from one zone to another. Most of the partial granite or basalt masses of the plateau have outer walls formed of cliffs and superimposed talus, which give the hills the appearance of step-pyramids; but some of these kwallas are little more than fissures or gorges, like the North American cañons. Such chasms appear to be but a stone's throw across; their true size, however, can only

Fig. 41.—PROFILE OF ABYSSINIA FROM EAST TO WEST.

Scale 1 : 6,000,000.



The scale of heights is 250 times larger than that of distances.

6 Miles.

be seen on descending into the abyss, walking for hours on the edge of giddy precipices, crossing the torrents at the bottom, and then scaling their abrupt sides. The defiles are occasionally blocked by masses of rock swept down by the mountain torrents, and presenting serious obstacles to the local traffic. The most remarkable ravines occur along the eastern edge of the plateau, where the total fissure exceeds 6,500 feet, measured from the summit of the degas down to the sea-level. Nowhere else can a more convincing proof be observed of the erosive action of running waters. The two walls of certain gorges, rising nearly vertically within a few feet of each other to a height of some hundreds of feet, represent an erosion of hard rock amounting to at least ten thousand five hundred million cubic feet. Nevertheless, the waters have regulated the fall of the channel, which averages not more than one in forty yards. This incline is easily ascended, but several of the defiles remain blocked for months together by the mountain torrents; every year new paths have to be formed across the débris, while some have had to be entirely abandoned. The route to Kumaili, through which the English army marched to the Abyssinian plateau, had probably not been occupied by a military force since

FIG 42.—DAVEZUT FALLS, NEAR SAMARA (DEBRA-TABOR).



the time of the Greeks. Ethiopia is thus divided by gorges into numerous natural

sections. Instead of facilitating communication, as in the lowlands, the Abyssinian rivers become so many defiles difficult to traverse, and often completely cutting off two conterminous provinces for weeks and months at a time.

OROGRAPHIC SYSTEM.

From a geological point of view, the Ethiopian highlands present a striking resemblance to those of Arabia facing them. The rocky formations are identical, and consequently the mountains have much the same outlines, the same general aspect, and almost the same vegetation; while the populations, of common origin on both plateaux, have been developed in almost identical surroundings. The backbone of the whole Ethiopian plateau, still appearing on some old maps under the name of "Spina Mundi," is formed by the eastern edge of the mountains overlooking the low coastlands of the Red Sea. For a distance of about 600 miles this edge, precipitous on one side and developing a gentle incline on the other, runs north and south nearly in the direction of the meridian. West of this range, which also forms the water-parting, the whole of the plateaux gradually slope towards the Nile, as indicated by the kwallas through which flow the waters of the Mareb, Takkazeh, Beshilo, Abai, Jemna, and their affluents. On the eastern slope the escarpments are intersected at intervals by the deep valleys of the wadies rising on the plateau, which thus affords an accessible route to the heart of Ethiopia; but one river alone, the Awash, rises far west of the chain. The valley of this watercourse describes a regular semicircle south of the Shoa highlands, thus forming a natural barrier between the Abyssinian and southern Galla territory.

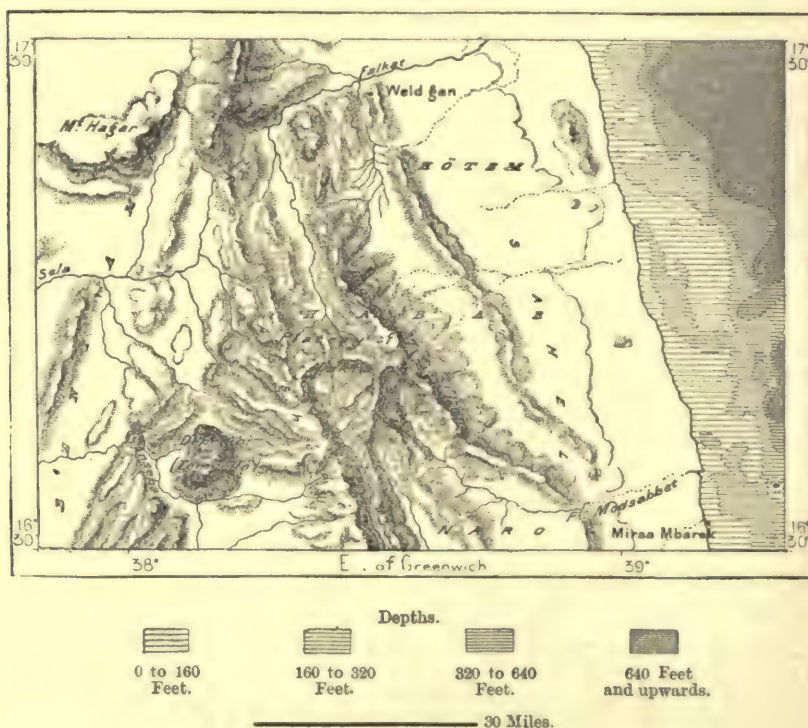
THE NORTHERN HIGHLANDS.

In its northern section the axis of the range is scarcely sixty miles broad, including the spurs and the lateral ridges. Its lowest eminences overlook the plain of Tokar from the south, where the river Barka loses itself in a marshy delta. Rising in abrupt terraces, it presents a steep face to the coast-line, which is here indented by inlets and broken into rugged headlands; the jagged crests leave only a narrow passage at their base, blocked by rocks and interrupted by wadies interspersed with quagmires. This region would prove an Ethiopian Thermopylæ for an army endeavouring to reach the mountain regions on this side. Farther south the sea retires from the mountains, leaving a strip of lowlands known, as in Algeria, by the name of Sahel, which stretches at a mean breadth of twelve miles along the base of the gneiss, granite, and schist escarpments; a few volcanic cones are scattered between the hills and the seacoast, while lava-streams here alternate with the sand and clay beds of the arid zone. The mountain range rises to a height of from 4,000 to 6,000 feet above the Sahel. The Rora, as the parallel chains are here called, expand in some places into plateaux, which, from the abundant rainfall and fertility of the soil, would amply repay the labour of cultivation. Thus the Rora

Azgedeh, running parallel with the coast, is connected by ridges with the Rora Isullim, or "Black Mountain," which lies still nearer the coast. They jointly bound the upland plain of Nakfa, about 5,000 feet above the sea, which drains into the Red Sea through one large torrent. At present a desolate district consisting of nothing but pasture lands, the Nakfa, "the most delightful region in Abyssinia," appears to be suitable for the culture of coffee, cotton, mulberries, the vine, and tobacco. A few mountain masses project in lofty headlands west of the Rora Azgedeh. Such is Hagar Abei Nejran, that is, "Capital of Nejran," over 8,000 feet in height, which is now covered with ruins, but which formerly contained the celebrated monastery frequented by pilgrims journeying from Aksum to Jerusalem.

Fig. 43.—NORTHERN SPURS OF THE ABYSSINIAN HIGHLANDS.

Scale 1 : 1,600,000.



Farther south the valley of the Anseba is dominated east by the Debr-Abi, or "Great Mountain," another almost solitary cliff, known also by the name of Tembelleh.

Bounded westwards by the valley of the Barka, the mountain range, forming a continuation of the Rora Azgedeh, is intersected by numerous headstreams of that river. The most important of these affluents, notably of the Anseba and the Barka itself, rise west of Massawah on the plateau, 4,000 feet high, which forms the north-east corner of Abyssinia proper. On this base another group of superb granite mountains rises to an elevation of some 16,000 feet. Such is the famous Debra Sina, or "Mount Sinai," to the east of Keren, and capital of the Bogo country.

The crest of this mountain is a chaotic mass of rocks of all sizes, which might be supposed due to volcanic eruptions, but which are indebted for their present form to slow meteoric action. These rocks, lying obliquely on each other, form the arched roofs of numerous caves, which have been artificially worked into dwellings and in many places connected by galleries. One has even been hewn into a monastery and a church, which is annually visited by thousands of pilgrims from every part of Abyssinia. South of Keren stands the Isad Amba, or "White Fortress," another rock famous in the religious annals of Abyssinia. This

Fig. 44.—THE SIMEN HIGHLANDS.

Scale 1: 1,000,000.



mountain rises almost vertically about 4,000 feet above the Barka Valley, its sharp peak scarcely affording sufficient space for the site of the convent walls.

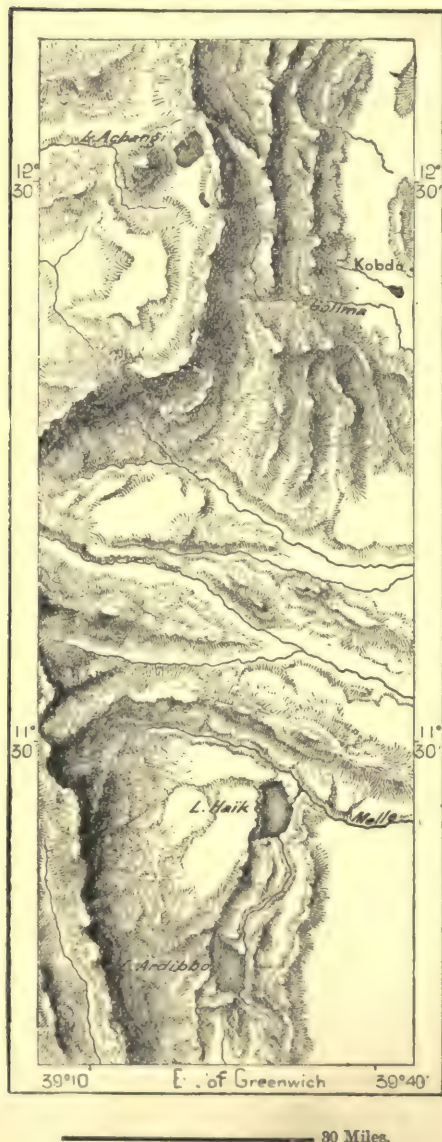
THE HAMASEN AND SIMEN UPLANDS.

In Abyssinia proper, commencing at the Hamasen plateau, the base of the uplands is at once broader and more elevated than in the Bogo (Bilen) country, its mean height exceeding 7,460 feet. Like most of the Ethiopian mountain masses, Hamasen is covered with trachytic or basaltic lavas, which are themselves overlaid by a reddish or yellowish earth. There can be little doubt that this ochrous soil covering the Abyssinia plateaux consists of decomposed lava, like the vast laterite masses stretching over the Dekkan and most of southern India. In various localities basaltic columns are found partially changed to masses of

reddish clay. Red is the normal colour of the Abyssinian rocks, the very veins of quartz being often of a pink hue, caused by the oxide of iron. According to Heuglin, at least one of the craters, from which were formerly ejected the Hamasen lavas, has been perfectly preserved. Rising midway between Keren and Adua to a

Fig. 45.—LAKES OF EAST ABYSSINIA.

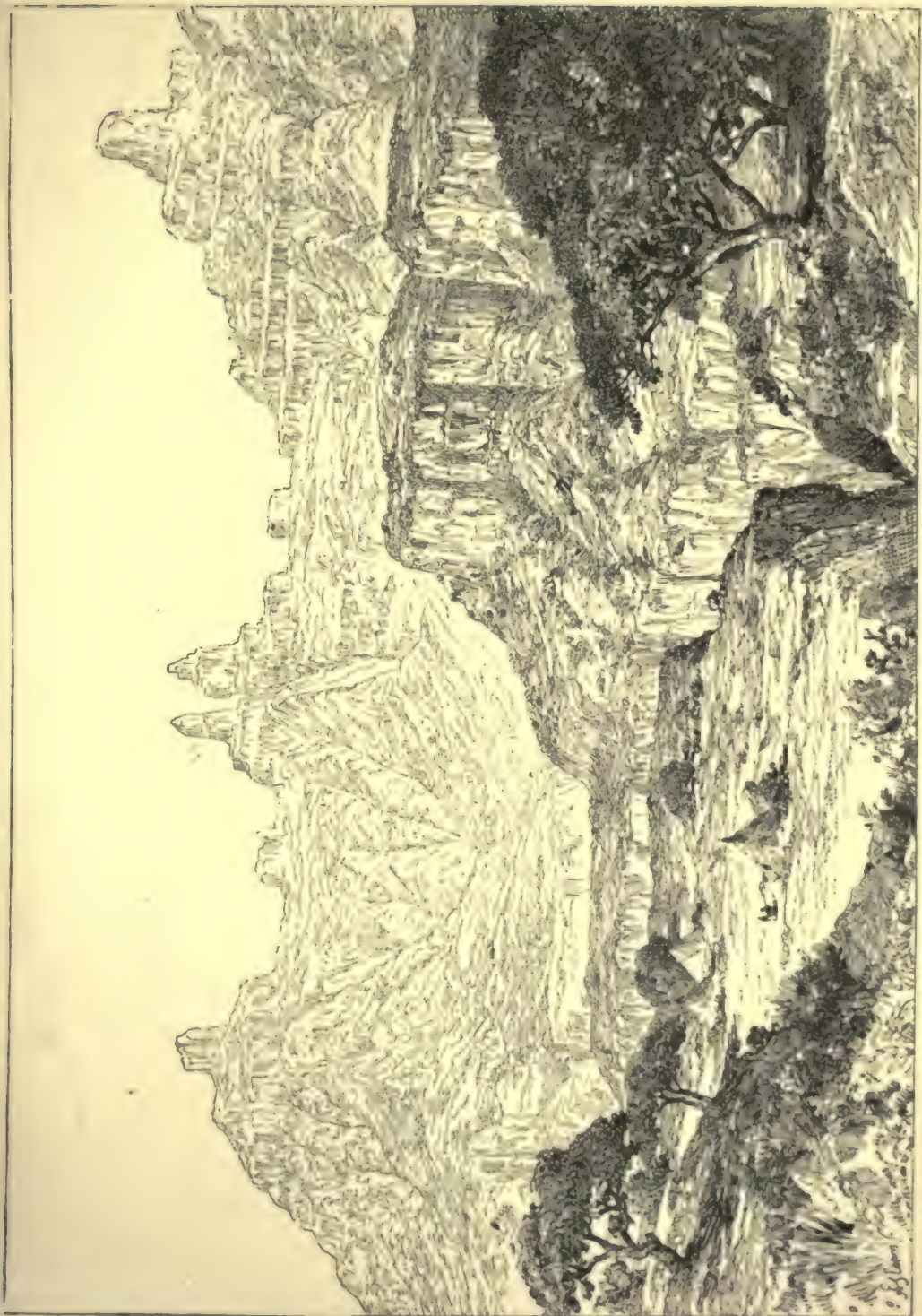
Scale 1 : 1,500,000.



height of about 400 feet, it is stated to present the appearance of a crater but recently extinct, although Rohlfs, following the same route, failed to discover it. To the south, on the eastern edge of the plateau, rise the isolated cones of other volcanoes. Some of the Tigré crests are veritable mountains, not merely in absolute altitude, but also in their elevation relative to the surrounding plains. Thus east of Adua, the cleft cone of Semayata attains a height of 10,306 feet, or over 3,000 feet above the town occupying a depression of the plateau at its base. Eastwards, near the outer ledge of the uplands, are other lofty hills, one of which, Aleqwa, rises to a height of 11,250 feet. To the west, between the Mareb and Takkazeh, the plateau gradually falls, the relative heights of the mountains diminishing in proportion.

The loftiest headland of northern Abyssinia is separated from Tigré in the north and east by the semicircular gorge of the Takkazeh, while the affluents of this great river encircle the plateau on the south-west, thus isolating the Simen (Samen, Semen, Semien, or Semieneh), that is the "northern" or "cold region." The mean height of its escarpments exceeds 10,000 feet, whilst the surrounding valleys of the Balagas to the south and of the Takkazeh to the north, are respectively 5,000 and 6,000 feet lower. Hence the waters flowing from the snowy Simen uplands have a very rapid course, in many

places broken by cascades. One of these cataracts Heuglin describes as falling some 1,500 feet into a chasm which appears to have been a crater partly destroyed by erosion. Like most of the other fragments of the Abyssinian plateau properly so-called, the Simen uplands consist entirely of volcanic, basaltic, trachytic, phonolithic,



SIMEN HIGHLANDS—VIEW TAKEN FROM THE LAMALMON PASS.



rocks and pumice, although their snowy peaks contain no craters. Till recently the Ras Dajan, probably over 15,000 feet, was considered the highest point in this district, but this distinction belongs probably to that of Buahit, or Abba-Yared. The highest peaks of these two mountains, rivalling Mont Rosa or Mont Blanc of the European Alps, are streaked with snow, and according to the natives, snow rests on them throughout the year. The aspect of the Simen highlands is scarcely so imposing as that of the Alps. They rise little more than from 1,500 to 2,500 feet above the base of the plateau; but at the escarpments of the terrace lands, from which they are separated by deep gorges, these mountains, with their fantastic towers, peaks, and successive vegetations of every climate clothing their flanks, stand out in all their sublimity. From the pass of Lamalmon on the Gondar route, the traveller on turning a rock comes suddenly on this amazing prospect, and utters an involuntary cry of admiration at the sight of the snowy peaks piercing the clouds.

THE EASTERN BORDER RANGE.

East of Tigré, the chain forming the eastern escarpment of Abyssinia is continued regularly north and south, interrupted by breaches some 8,000 or 10,000 feet high, which would facilitate communication with the plains on the Red Sea coast were the country not occupied by the dreaded Afar tribes. This border chain maintains its normal elevation for a distance of about 180 miles, but at certain points it merges in a rugged upland plain whose depressions are flooded by lakes such as Ashangi, Haik, and Ardibbo. Eastwards the mountainous tableland of Zebul, some 3,000 feet high, and dominated by peaks rising from 1,000 to 2,000 feet higher, advances far into the country of the Somali. Although their escarpments are so precipitous, and so densely clothed with matted vegetation, as to render them almost inaccessible, the Zebul heights are not to be compared with the majestic Abyssinian mountains. The Bekenna, or Berkona, an affluent of the Awash, rising in the watershed near the sources of the Takkazeh and Beshilo, separates the border chain from the Argobba, a lateral ridge which projects far into the lowlands, forming in the south-west the last spur of the Abyssinian highlands.

The line of transverse depressions, indicated on the coast by the Gulf of Tajurah, and in the interior by the bed of Lake Tana, is well defined on the border terrace by a nucleus of diverging valleys constituting the main point of radiation of all the Abyssinian rivers. Near the hot spring forming its source rise other tributary rivers of the Takkazeh; the chief affluents of the Beshilo or Beshlo, which with the Abai forms one of the main headstreams of the Blue Nile, also originate in these mountains, while their eastern slopes give birth to many tributaries of the Awash and of the Gwalima, or Golima, which latter finally runs dry in the plains of the Afars.

In the vicinity of Lake Haik, east of the fortress of Magdala, the range is crossed by a pass said to be considerably less than 7,000 feet high, thus forming the

lowest breach in the border chain of Eastern Abyssinia. But on this side, where the regions are broken up into distinct fragments by the deep river gorges, many mountains attain a height inferior only to those of the Simen and Gojam. Thus east of Lake Ashangi, on the almost isolated upland province of Lasta, which is almost surrounded by the Takkazeh and Tzellari rivers, Mounts Biala and Gavzigivla exceed 12,600 feet; while the heights of Abuna, Yosef, and Imaraha, not far from the source of the Takkazeh, attain an elevation of over 13,000 feet. South of the Takkazeh an irregular plateau stretches westwards, terminating in Mount Guna, one of the highest Abyssinian summits (14,000 feet). Its western spur, sloping towards Lake Tana, forms the famous Debra-Tabor, or "Mount Tabor," site of the present military capital of Abyssinia. To the north rise the Beghemeder Mountains, beyond which are the still little-known Belessa highlands, connected with those of Wagara and Kwalla Wagara, the whole series forming a successive series of terraces towards the Nilotic plains.

CENTRAL AND WESTERN HIGHLANDS.

West of the Galla Wollo plateau, supposed to be a vast lava field, the slopes incline gradually towards the Blue Nile, interrupted, however, by secondary chains. Abruptly intersected southwards by the deep semicircular gorge containing the waters of the Abai, or Blue Nile, the plateau recommences more to the west, rising in terraces up to the Gojam Mountains, which, jointly with those of Simen and Lasta, form the culminating points of Abyssinia. The chief range of this mountainous province extends in a semicircle, concentric to that described by the Blue Nile; its highest crest, the Talba Waha, probably exceeds 12,000 feet. But although one of the peaks takes the name of Semayata, that is "Heaven-kissing," it does not appear to be ever covered with snow; nor do any of the summits in this region, between 11° and 12° of latitude, seem to reach the snow-line.

Like most other Abyssinian ranges, the Talba Waha Mountains fall in steep escarpments east and north, whilst on the west they slope gently towards the territory of the Gumis and Bertas. The rest of the plateau is broken in the north and north-west by watercourses into countless fragments, forming a succession of steps overlooked by a few pyramids of a relatively slight elevation. The Waldebba height, in the north-west angle of Lake Tana, exceeds 7,000 feet. The whole of this region is of volcanic origin, terminating towards the lowlands in abrupt masses with vertical walls from 80 to 100 feet high, surmounted by basaltic columns. Beyond the promontory of Ras-el-Fil, that is, "Elephant Cape," skirted by the river Rahad on the south-west, the level steppe presents an extraordinary appearance, from the fantastic crags, peaks and needles covering it. The most advanced of these remarkable formations is the completely isolated granite mass of Gana or Jebel Arang, whose sides and summit to a height of nearly 2,000 feet are clothed with large forest-trees, including the baobab, which here reaches its northern limit.

THE ABYSSINIAN SEABOARD.

Beyond the Abyssinian plateaux in the vicinity of the Red Sea rise such promontories and isolated headlands as the Gadam, or Gedem, formerly an insular rock, but which now forms a promontory between the Gulf of Massawah and Adulis Bay, terminating in an abrupt incline. This granite mass, although visible from Massawah, has not yet been accurately measured, the estimates of travellers varying from 2,700 to 3,300 feet; but d'Abbadie has geodetically determined its highest point at over 5,000 feet. The Buri headland, bounding Adulis Bay on the east, also terminates in the imposing volcanic cone of Awen, the Hurtow Peak of the English maps, which, although apparently extinct, is said by the natives still to emit steam and sulphureous vapours. Copious hot springs flow from its sides, while thousands of jets at a temperature of 168° F. bubble up amidst the surf on the beach.

South of the Buri peninsula are other irregular hills composed of volcanic rocks completely separated from the mountains of Abyssinia proper. But a still active volcano, known to the Afars under the name of Artali, or Ortoaleh, that is, "Smoky Mountain," rises at the extremity of a spur of the Abyssinian plateaux, south-west of Hanfila (Hamfaleh) Bay, attesting the existence of underground energy, of which so few examples still occur on the African coast. It is described by Hildebrandt, the only explorer who has approached its crater, as a cone of blackish lava seamed with crevasses, and ejecting dense volumes of whitish vapour. In its vicinity stands another now quiescent sulphureous mountain, from the deposits in its crater known as Kibrealeh, or "Sulphur Mountain;" whilst farther north, near the salt plains, are the isolated solfataras of Delol, or Dallol, whence the Abyssinian highlanders obtain the sulphur with which they manufacture their gunpowder. Finally, to the east, near the small harbour of Edd, a chaotic mass of solfataras and craters gives the district the appearance of a storm-tossed sea. Seafarers speak of lavas ejected within "a day's march" of Edd, especially in 1861, but their origin is unknown, unless they proceed from the already mentioned Mount Ortoaleh, which lies, however, not at a day's journey, but fully sixty miles inland. These volcanoes are greatly feared by the natives, who believe them to be the abode of evil spirits; under the guidance of their wizards they sacrifice a cow to them, but directly the animal is placed on the flaming pyre they run away, lest evil should befall them if they saw the spirits devouring their prey.

LAKE ALALBED.

Although Ortoaleh is not situated on the sea-coast, it rises above the district of Rahad, a lacustrine plain which was formerly a marine inlet. This depression, which Munzinger called Ansali, from an isolated mound rising in its midst, stretches over a superficial area of about 1,000 square miles at a mean level of some 200 feet below the Red Sea. This plain, a miniature "ghor" similar to that flooded by the Jordan and the Dead Sea, is almost entirely surrounded by a sinuous belt of

gypsum cliffs, here and there intersected by wadies. Their summits are crowned with feathery *dum* palms, and from their sides flow perennial springs. A verdant circle thus surrounds this desert waste, where nothing is visible but a few acacias and brushwood. At some distance from the cliffs are saline efflorescences, which become gradually solidified towards the middle of the plains, where they acquire the consistency of slabs some two feet thick. Here and there they present a greyish tessellated appearance, the interstices being filled with dazzling white crystals. At the lowest level of the depression, between the Ansali promontory and Mount Ortoaleh, are collected the waters of Lake Alalbed, or Allolebed, whose size varies according to the quantity of water brought down by the torrents. Its mean depth is said scarcely to exceed 40 inches. The dessication of the old bay of

Fig. 46.—LAKE OF ALALBED.

Scale 1 : 1,500,000.



Ansali may be explained by a gradual upheaval of the coast west of the Red Sea, as well as on the east side in Arabia. The coral banks and recent shells found at the north of the plain attest the presence of marine waters on the now upheaved depression between the plain of Ragad and Auwakil Bay. The rivers flowing from the Abyssinian chain are not sufficiently copious to repair the loss by evaporation, and thus the old lake, formerly of some extent, has gradually become a shallow swamp. The Taltals, who inhabit the surrounding district, assure the Abyssinians, possibly to protect themselves from their visits, that the lake occasionally "walks away" from its old bed in search of a new one; and woe to the caravans overtaken by this sudden inundation! Besides, even at some distance from the lake, travellers run the risk of sinking into the treacherous soil, and whole companies of men and beasts are said to have thus disappeared.

However, the banks of the lake are traversed in safety by hundreds of Taltals, who here procure nearly all the salt required for the Abyssinian market, and the little salt bricks used as a small currency in southern Abyssinia. According to Munzinger, they procure from the bed of this lake some thirty millions of bricks annually, equivalent at Antalo, on the plateau, to a sum of £320,000.

DAHLAK ISLAND.

The islands of the neighbouring coast, notably that of Dahlak, the largest in the Red Sea, which shelters Massawah Bay from the east, are partly of coral and partly of volcanic origin. They are skirted by headlands and lava streams, and in many places the land is intersected by deep crevices, apparently due to subterranean disturbances. The two walls of these chasms do not always stand at the same elevation, in some instances showing discrepancies of some fifty feet. During the rainy season the water collects in these hollows, and when evaporated verdant meadows spring up from the damp soil, contrasting pleasantly with the bare rocks surrounding them. The island of Dahlak is subject to earthquakes, which the natives say are caused by the movements of the "bull who supports the world." Hot springs are found in the interior, in which fish are said to live, although their temperature exceeds 172° F.

CLIMATE.

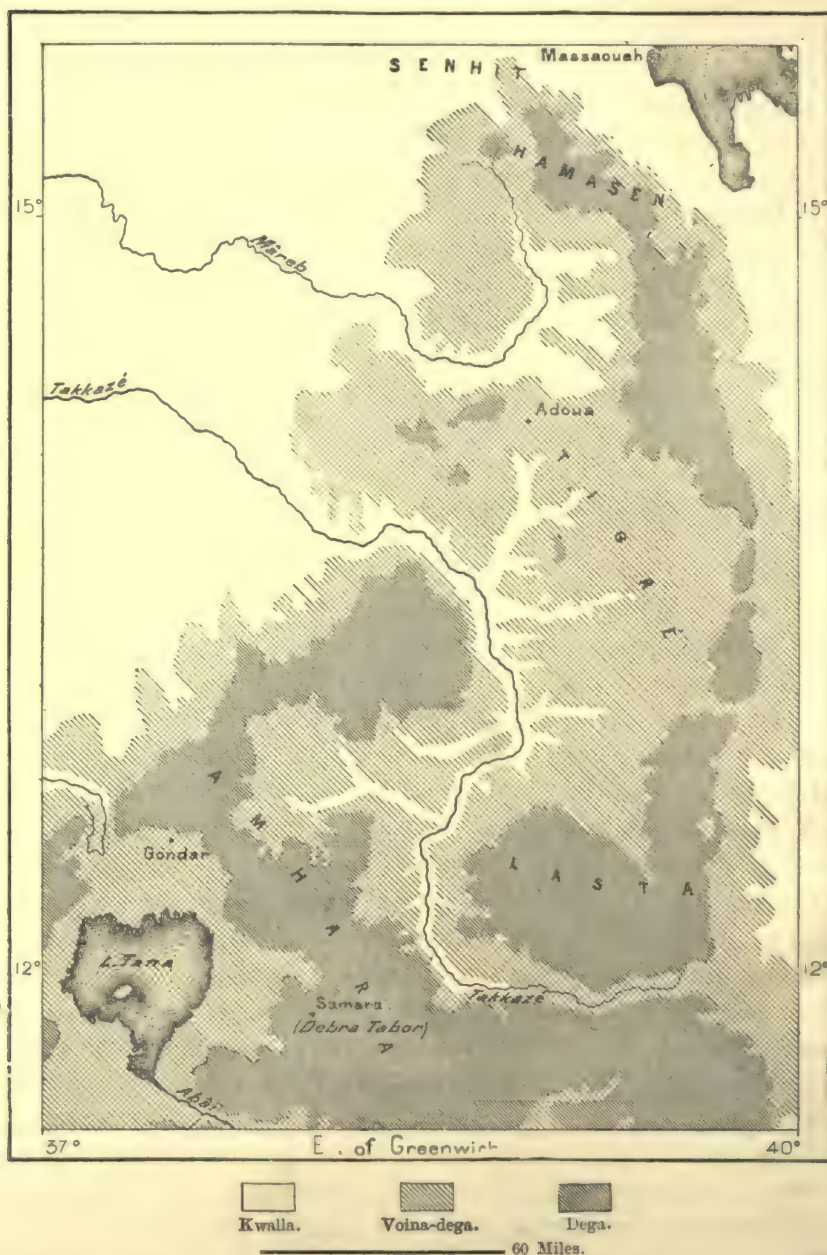
Abyssinia, whose summits rise above the snow-line, while their base sinks to the level of the Torrid zone, naturally presents every diversity of climate according to the altitude and aspect of its uplands. On the slopes of the plateaux and mountains, the seasons are diversely distributed, continually overlapping the network of isothermal lines so regularly placed on our climatological maps of Abyssinia. How often have travellers, facing the bitter cold wind of the plateaux, succumbed to that frosty sleep which ends in death! On military expeditions whole battalions have been frozen whilst crossing these snowy passes, and d'Abbadie quotes a chronicle, which states that a whole army thus perished in Lasta. But at the bottom of the narrow *ambas* death is more frequently caused rather by the intense heat, for under the summer sun these gorges become veritable furnaces, the soil glowing at times with a heat of some 190° to 200° F. The air is generally calm in these apparently closed ravines; but if the equilibrium is suddenly disturbed, a raging tempest tears up the valley, the air soon returning to its former tranquillity. The absence of regular currents sweeping away the impurities of the air, renders the *ambas* extremely dangerous to traverse. Before or after the rainy season they must be crossed rapidly, in order to reach the slopes above the fever zone. Although exposed to an almost equal degree of heat, the plains bordering the Red Sea are much more salubrious, and are dangerous only in those years when the rainfall is excessive.

But these extremes of heat and cold are unknown in the central districts, where

nearly all the urban populations are concentrated, with the exception of the towns that have sprung up round the mountain strongholds, or places of pilgrimage. The inhabited zone—that is, the *voïna-dega*, or “wine region,” between the *degas* and

Fig. 47.—INTERMEDIATE ABYSSINIAN PLATEAUX AND VALLEYS.

Scale 1 : 3,500,000.



kwallas—lies mainly at a height of from 6,000 to 8,000 feet. At these elevations the mean temperature corresponds to that of the Mediterranean sea-coast, with this difference, that the changes of season are much less noticeable. As the plateaux

lie within the tropics, the sun's rays maintain their intensity throughout the year, the discrepancies between winter and summer being very slight, and due mainly to the purity of the air and density of the clouds. As in the West Indies and in all countries subject to regular monsoons, the Abyssinian year is regulated by the appearance and disappearance of the rains.

The rainy season varies in time and duration according to the height, latitude, and position of the various provinces. Some regions have even two rainy seasons, being lands of transition belonging at once to two meteorological domains. The southern Abyssinian uplands have two winters, the first commencing in July, when the sun is nearly vertical above the soil, and ending in September; the second and shorter falling in January, February, or March, when the belt of clouds formed at the zone of contact between the trade-winds and polar currents is deflected southwards. In the central region the winter, or *azmara*, commences usually in April, continuing, with a few interruptions, till the end of September; but at the north-west base of the mountains, in the Bogos, Galabat, Gedaref, and Senaar provinces, this rainy season is broken into two, one beginning in April or May, the other, accompanied by tremendous downpours, lasting throughout the months of July, August, and September. The rains, brought by the wind blowing from the Red Sea or Indian Ocean, fall nearly always in the afternoon, accompanied by tempests, but soon clear off, leaving the sky unclouded during the night and following morning. On the eastern slope of the mountains, however, the seasons are reversed, the rains brought by the north wind falling in winter, which lasts from November to March.

The African coast of the Red Sea lies within the zone of the Mediterranean winter rains, whilst those of Arabia, the interior of Egypt, and Upper Abyssinia belong to a different climatic system. Certain mountains situated on the boundary of the two zones are alternately beaten by winter and summer rains, and the Abyssinian shepherds have but to go round the mountain to find, according to the season, the herbage necessary for their flocks or land ready for culture. During this period the air enveloping the lowland plains is excessively damp, the hygrometer never indicating a less proportion than 60 per cent., while the air of the plateaux is, on the contrary, usually dry.

In the districts where the annual rainfall has been roughly estimated, it is found to vary from two to three inches yearly. But the discrepancy must be much greater in some upland valleys, where the rainclouds are driven together by the winds. Here hailstorms are very frequent. Floodings are known to be extremely dangerous in valleys surmounted by precipitous and barren rocks; but on the eastern ledges of the Abyssinian border ranges these sudden deluges rushing through steeply inclined watercourses are even more dangerous than elsewhere. During the rainy season all communication ceases between the plateaux, which are divided one from the other by deep kwallas. In the plains of Samhar the caravans, journeying through sand, saline clays, and lavas, are occasionally stopped by the intolerable heat reflected from the earth or rocks, or else by the sandy whirlwinds of the *kharij*, or columns of red sand sweeping over the desert.

FLORA.

Thanks to its variety of climate, the flora of Abyssinia is extremely diversified. The two chief zones of vegetation are naturally those of the upland plateaux and lowland valleys; but many of the species flourish in both regions. Each plant has its particular zone, differing in range and vertical height along the slopes. The shores of the Red Sea have their special flora, characteristic of which are the *kudel* (*cassipourea africana*) and the *shora* (*avicennia tomentosa*), trees growing on the strip of coast which is alternately flooded by the tides. On the shores of Hawakil Bay these trees are similar in appearance and nearly as large as the European beech. At the foot of the range in the Sahel zone, often described as barren, the vegetation consists merely of scrub, except in the vicinity of the streams. The flora of the kwallas is distinguished especially by its wealth in deciduous trees, whose leaves fall in the dry season. Here flourish the sycamore and the fig; here the tamarind and acacia intertwine their thorny branches along the banks of the mountain torrents. Here and there the huge baobab, "giant of the vegetable kingdom," which, nevertheless, in many respects presents the appearance of a grass, raises its bulging stem, often hollow and filled with water, its tufted branches terminating in wreaths of foliage. When blown down by the wind its huge trunk, some 60 to 80 feet in circumference, affords a refuge to the shepherds and their flocks.

The palm scarcely penetrates into the kwallas, being confined mostly to the Red Sea coast. Hence the Abyssinians import their dates from Arabia. The cereals are of a particular species, or else of varieties very different from those of Europe, and flourish best in the middle zone, where nearly all the Abyssinian towns are concentrated. The Shoa and Amhara peasants are said to possess twenty-eight varieties of millet, twenty-four of wheat, sixteen of barley, and several kinds of rye and maize. The most general cereal is the *dakussa*, an eleusina, which is now made into beer, but which formerly supplied bread exclusively for the royal family. The *tef* (tief), a species of poa, is also largely employed in the manufacture of farinaceous foods. The potato, introduced by Schimper, after flourishing for some time, was attacked by blight, and its culture has now been almost completely abandoned. The *musa ensete*, a species of banana growing in the kwallas, rarely bears fruit, probably because it comes originally from the Galla lowlands. The leaves are utilised for forage, and its roots taste like the potato when cooked. The European fruit-trees, or their corresponding varieties, generally produce excellent crops. The vine, doubtless introduced from Europe, as attested by its Greek name of *voïna* (*oïnos*), was formerly widely diffused throughout the whole intermediary zone, which was thence known as "vine-land." But this plant has almost disappeared, having been destroyed by the *oidium*. Some travellers have also accused King Theodore of having uprooted it, on the pretext that wine should be reserved for beings superior to mortals. Lastly, coffee does not appear to be indigenous, and is cultivated only in Gojam, in the Gondar district, on the southern shore of Lake Tana, and in a few other regions of the plateau.

One of the most characteristic wild plants of Abyssinian scenery is the kolkwai, or branching euphorbia, similar to the giant euphorbias of the Canaries and Azores. The fleshy branches of these trees interlock so tenaciously that they are trained round villages to protect them from sudden attacks. Many attain a height of over 40 feet. Their milky sap is a rank poison, much employed in the Abyssinian pharmacopœia, while the wood serves for the manufacture of gun-powder. Another plant, the jibara (*rhynchoptelum montanum*), an annual similar in appearance to the palm, clothes the mountain sides to a height of some 11,000 feet. It is remarkable for a gorgeous display of lilac blossom clustering round a floral stem shooting from 10 to 16 feet above a topmost tuft of sword-like leaves. Another characteristic plant of the uplands is a giant thistle (*echinops giganteus*), with a stem like that of a forest-tree, and flowers the size of a man's head. Still larger are the furze-bushes, which attain a height of some 26 feet. On the upland terraces also flourishes the majestic kusso (*Brayera anthelmintica*), whose dense foliage, interspersed with innumerable bunches of pink flowers, is employed in Abyssinia, and even in Europe, as an infusion, as recommended by Brayer, against the tape-worm; the *ficus dara*, a species of fig, resembles the Indian banian, with its aerial roots forming fresh stems and developing forests capable of sheltering some hundreds of people. The wanzeh (*cordia Abyssinica*), is a tufted tree usually planted round houses. The conifer family is represented on the upland plateaux by the yew, and especially by the juniper, whose huge trunk rises from 100 to 130 feet, and in Shoa even to 160 feet.

Some regions of Abyssinia, especially the hilly Zebul district east of the border range, are covered with vast juniper forests, which present an unique appearance, for in no other part of the globe are conifers resembling those of the northern zone to be found matted together with a network of tangled creepers resembling those of the tropical forests. But, on the whole, Abyssinia is a disafforested country, the destruction of nearly all its upland woodlands being due to the common African practice of firing the prairie tracts. The landscape seen from the uplands is in many places relieved only by the green oases surrounding the villages or the sacred groves of the churches. Besides, but few varieties of trees are included in the Abyssinian flora, merely some 235 known species, of which thirty belong to the voïna-degas, and ten to the degas. But thanks to the variety of climates and vegetation on the slopes and uplands, Abyssinia may possibly one day become a vast botanic garden for the cultivation of all European trees, alimentary and useful plants. A poor mineral country, containing little else but iron, salt, and sulphur in the volcanic regions, and some gold dust in Gojam and Damot, it is amply compensated by the abundant resources yielded by its diversified flora, European on the uplands and Indian on the lowlands. But these resources will be of little use till easy routes of communication are opened between the Abyssinian plateaux and the outer world. Even in the favourable season, when the rains have not swollen the torrents and converted the paths into quagmires, the traveller crossing Abyssinia from the Red Sea to the plains sloping to the Nile has a journey of some months before him. The stages and provisions are regulated by the king, and many a traveller has had to wait some weeks for the permission to continue his route.

FAUNA.

The diversity of climate and flora naturally gives rise to a corresponding variety in the animal kingdom. On the lowlands the fauna resembles that of Arabia or the Sahara, on the outer spurs that of Senegal, that of the Mediterranean on the plateaux, whilst it is almost European on the mountain summits. On the lower plains are found the giraffe, the zebra, the wild ass, and the ostrich. Of the numerous species of antelopes inhabiting Abyssinia, few advance far up the plateaux, although the wild goat is found on the crests of the Simen range, at a height of over 13,000 feet. Numerous varieties of the monkey family, amongst others the *colubus guereza*, noted for its beautiful black-and-white fur, are confined to the lowland forests of Shoa, Gojam, and Kwalla-Woggara. But a certain species of cynocephales are found at an altitude of some 6,000 feet. The rhinoceros has also been met at an elevation of 8,000 feet. The elephant also frequents the mountains, although he prefers the thickets of the valleys, where he commits extensive depredations on the plantations. But this pachyderm is disappearing before the attacks of the hunter, who eagerly pursues it, as much for the sake of its ivory as to retaliate for the havoc it commits on the cultivated lands. According to the Arab lowlanders, the elephant knows when to expect the caravans laden with *durrah*, attacks them from its ambuscades, and takes possession of the supplies. The hippopotamus is also forced by want of water as far into the interior as the foot of the cascades, and is also numerous in Lake Tana, where, however, it does not grow to such a size as those of the large African rivers.

The lion is rarely found above the lowlands or beyond the Beni-Amer territory in the north. It differs from its Central African congeners by its deep black mane; indeed, one variety, infesting the banks of the Takkazeh, is almost entirely black. A more dangerous animal is the leopard, which roams throughout the country to a height of 11,000 feet. Like the Indian tiger, these carnivora often become man-eaters, for when they have once tasted human flesh they prefer it to all other prey. A still more formidable beast is the *wobo* or *abasambo*, believed by Lefebvre to be a wolf, and said to partake of the qualities of the lion and the leopard. The spotted hyæna is also very common. The buffalo, which frequents chiefly the riverain kwallas, is of all other savage beasts the readiest to attack man; it fears no enemy, and its furious rush is checked neither by quagmires, rocks, nor prickly thickets. The wild fauna also includes the wild boar, which, to spite the Mohammedans, is occasionally eaten by the Abyssinian Christians, although usually regarded as impure. The Abyssinians also reject the flesh of the tortoise, and of all animals show the greatest repugnance to the hare, in this latter respect strictly adhering to the law of Moses. It is usually stated that Africa possesses no song-birds, but Abyssinia best shows how erroneous this statement is, as it possesses numerous varieties of these birds, nearly all of gorgeous plumage. The sacred ibis (*geronticus aethiopicus*), no longer seen on the banks of the Egyptian Nile, is still met in the Upland Abyssinian valleys. The branches of trees overhanging rivers and pools are covered with the nests of the *textor alecto*,

or *ploccus aureus*; Stecker has counted as many as eight hundred and seventy-two of these basket-nests on a single acacia.

According to the altitude of the country that they inhabit, the Abyssinians rear different domestic animals. Camels are used only on the lowlands, never being found beyond a height of 5,000 feet. The Abyssinian horse, bred throughout all the inhabited regions, is evidently of Arab stock, but smaller and stouter, of dog-like fidelity, and almost as strong and surefooted in climbing rocks as the mule. The donkey has also been introduced into the plateau, but it is weak and useless as a pack animal, possessing none of the qualities of the European variety.

Thanks to its immense and succulent pasture-lands, Abyssinia is an excellent cattle-breeding country, and some of its breeds, differing in stature, shape, length of horn and colour, almost rival the finest European species. In many parts of the plateau are found the two kinds of sheep, the short and fat-tailed, besides an intermediate variety. The goat is also bred, its skin supplying the parchment on which most of the sacred books are written. There are neither pigs, pigeons, ducks, nor geese, but poultry is found in every village, and in some churches cocks are kept to announce the hour of morning prayer. Excepting the sheep-dog, which is large and courageous, the domestic dog is small and of indifferent qualities. The Abyssinians occupy themselves with apiculture in some districts, but the honey has poisonous properties whenever the bees obtain it from the flower of the branching euphorbia. An analogous phenomenon has been observed for ages in the Caucasian and Pontine mountains.

INHABITANTS.

Elements of the most diverse origin have been blended in the present populations of Abyssinia. Immigrants from the Arabian peninsula, the banks of the Nile, and the surrounding uplands and lowlands, have here become intermingled in divers proportions with the aborigines. Amongst those still regarded as of native origin are the Agau, that is "The Free," still forming the fundamental element of the Abyssinian nation, and found chiefly in the provinces of Lasta on the Upper Takkazeh, and in Agaumed, west of Lake Tana. According to some Egyptologists, the Agau are the descendants of the Uaua, the Nubian people spoken of on ancient monuments who were gradually driven towards the Upper Nile and neighbouring highlands. Many of their sacred ceremonies are said to betray traces of the uninterrupted influence of the ancient Egyptian religion. The Agau hold feasts on the banks of the Blue Nile and Takkazeh in honour of these sacred rivers; they likewise worship the serpent, which plays so important a part in primitive Egyptian mythology, and which is even still adored by numerous nations of the old and new worlds. They speak a peculiar dialect, the *hamtenga* or *hamva*, which, however, is allied to the same stock as the *amharina*, the current speech of Abyssinia.

THE FELASHAS.

The *Felashas*, or "Jews of Abyssinia," variously estimated at from 10,000 to 20,000, are very probably of the same stock as the Agau. They are found throughout the plateaux, and even in Shoa and Gurageh, divided into three religious sects, each with its high priest. In southern Abyssinia they are called Fenjas, but are no longer found in the Simen mountains, where they still predominated towards the close of the sixteenth century. The national name, Felasha, signifies "exiles," and in point of fact they claim descent from the ten tribes banished from the Holy Land. On the other hand, they are fond of quoting legends to prove that their ancestor was Menelik, the son of Solomon and the Queen of Sheba. Of the explorers who have visited them, several consider their type similar to that of the eastern Jews; but observers have generally failed to notice any striking difference in features between them and their neighbours, except perhaps that their eyes are a little more oblique than those of the Agau. Their language, the *kuara*, *huara*, or *huaraza*, said to be dying out, also resembles that of the Agau, and lends additional force to the hypothesis of the two peoples springing from a common stock. But their religious zeal connects them so closely with the Jews that it would not be surprising to find other Israelites regarding them as of kindred race. In any case, there was a complete religious cohesion between the numerous Jewish communities of Palestine and Abyssinia at the period when uninterrupted communications existed between the Moriah of Jerusalem and the numerous "Mount Sinai's" of the African plateaux. Intercourse was maintained chiefly by means of the powerful Jewish republics then occupying a large part of the Arabian peninsula. One of these states still existed in the Himyaritic country fifty years before the birth of Mohammed. Their religion was spread from the east beyond the Red Sea, and at the period of their decadence the "chosen people" held their ground best in the west. The Felasha religion no longer predominates in Abyssinia, and their dynasties survive only in the popular traditions; still, unlike the Arabian Jews, they are not a hated race persecuted by the other sections of the community.

In nearly all the provinces they hold themselves aloof from the Abyssinians, occupying separate villages or else separate quarters in the towns. The mosques are divided into three compartments of unequal sanctity, like the primitive Jewish tabernacles, and are recognised from a distance by an earthenware vessel placed on the highest pinnacle. Desirous of preserving the purity of their race, the Felashas never marry women of alien religions; they are even forbidden to enter Christian dwellings, and when they have been polluted by such a visit, are bound to purify themselves before returning to their own homes.

Polygamy is not practised, and marriage is much more respected by them than by the Abyssinians, although the women have more personal freedom. Early marriages, so common amongst the Christian families, are rare amongst them, the men marrying between the ages of twenty to thirty, and the women from fifteen to twenty. Like the Mohammedans, their morals are generally superior to those of their Christian masters, but unlike other Jews, they have no taste for trade. They

are mostly artisans, smiths, masons, carpenters, potters, and weavers; some also are farmers and cattle-breeders, but all unanimously reject the mercantile profession as contrary to the laws of Moses. Their interpretation of the holy books does not correspond to that of the rabbis of Europe and Asia; besides, however zealous they are to obey the precepts of the "law," many of their practices are intermingled with numerous ceremonies borrowed from the native Christians. They are zealous in the strict observance of the Sabbath, in the sacrificial offerings on the holy stone of the temple, and adhering to the traditional rites in purifying themselves by frequent ablutions. Each family possesses a hut outside the village, where all sick persons must be removed for a stated term, a practice often causing the death of the aged, who are thus deprived of the services of their relations. But these religious customs will soon probably be but a memory of the past, as the Abyssinian Government considers that the subject should profess the same religion as the king. According to the reports of late travellers, a royal manifesto compelling the Felashas to become Christians was about to be issued.

The caste of the Kamants, believed to be of Agau origin, are found in small communities in the mountains surrounding Gondar, in the kwallas of the north-western slope of Abyssinia, as well as in Shoa. They speak the same language as the Felashas, whom they resemble in physical appearance; their traditions are the same, and like them they claim descent from the prophet Moses. If they do not celebrate the Sabbath, they at least abstain from work upon that day; some are also said to do no work on Christian feast-days. However, they are considered as pagans by Jews and Christians alike, and are said to practise certain ceremonies in the recesses of the mountains. At the beginning of his reign Theodore intended to forcibly convert them to Christianity; but he was advised that it would not be proper to treat as equals before God these despised people, the hewers of wood and drawers of water to the families of Gondar. The Kamants are far more industrious than the Abyssinians, who consider themselves their superiors, and Gondar and the surrounding towns are dependent for their daily supplies on the labour of this tribe. Like the Orejones of the New World, and like the Wa-Kwafi of the Kilima N'jaro district and many other Bantu tribes, the Kamant women distend the lobe of the ears with wooden discs, causing the outer cartilage to reach the shoulders.

The Woïto, on the banks of Lake Tana, hippopotamus hunters and fishermen, who till recently still spoke the Agau dialect, belong also to the aboriginal populations. They do not circumcise their children, and eat the flesh of animals clean or unclean. The Tsellans, in the same region, are wandering shepherds.

THE BOGOS.

The Mensa, and Bogos, or Bilens, who occupy the northern slope of the Abyssinian mountains in the Senhit (Sennaheit or "beautiful") country, which separates the Sahel from the Barka Valley, are also said to be of Agau origin, although d'Abbadie connects them with the ancient Blemmyes. The Bogos, or

rather the Boasgors, that is "Sons of the Boas," say that their ancestor was an Agau of Lasta, who is said to have fled from his country towards the middle of the sixteenth century to escape the vendetta. Situated as they are, between the hostile lowland Mohammedans and upland Christians, the Bogos have been almost exterminated. In 1858 they numbered merely some 8,400, but this remnant have kept their Bilen language and a few of their Christian practices. Although reduced to a few family communities they have been studied most carefully, their customs being taken as typical of those found among all the peoples of Northern Abyssinia.

The community is divided into two classes, the *Shumaglieh*, or "elders," and the *Tigré*, or "clients;" these latter probably conquered Abyssinians or immigrants that have been received into the tribe. The *Tigré* is the slave of the *Shumaglieh*, who, however, cannot sell him, though he may yield him with his lands to another master; he is even bound to protect him and avenge his insults. The life of a *Tigré* is valued at that of another, or at ninety-three cows, whereas that of a *Shumaglieh* is worth another *Shumaglieh*, or one hundred and fifty-eight head of cattle. The eldest son of a *Shumaglieh* inherits his father's two-edged sword, white cows, lands, and slaves, but the paternal dwelling falls to the lot of the youngest son, the daughters receiving nothing. Female virtue is highly esteemed, but women have no personal rights or responsibilities, being regarded merely as so much property, and are classed with the hyæna, the most despised animal throughout Abyssinia. The Bogo husband never sees the face or pronounces the name of his mother-in-law, whilst it is criminal for the wife to mention the name of her husband or father-in-law. According to tradition the picturesque country now occupied by the Bogos was once the country of the Roms, who are still commemorated in song as daring warriors, who "hurled their spears against heaven." These ancient Roms were, perhaps, the advanced pioneers of Byzantine civilisation, or else Adulitains driven into the interior by the Mussulman conquest.

THE MENSAS AND MAREAS.

North of the Bogos, and occupying the same uplands, dwell the Takueh, also of Agau stock and speaking the Bilen language, whence their name of Bilen, sometimes given to them by the Bogos. Like most of their neighbours, and probably with good reason, they pride themselves on being a nation of conquerors, but they have been aborigines of African extraction since time immemorial, and lands formerly belonging to their families are still shown in Hamassen. The Dambellas in the west are also Abyssinians, whilst the Mensa highlanders of the east and the Marea in the mountainous region bounded north by the Anseba river, claim to be of Arab origin, and even trace their descent from an uncle of the Prophet. Although peasants, they are half nomads dwelling in tents. Yet the Mensas and Mareas were formerly Christians like the Takueh and Bogos, and the work of converting them to Mohammedanism was not undertaken till the first half of this century. Since their conversion, in times of peril they still often pray to Ezgiabeher, their

former god, instead of to Allah, and have also ceased to raise mounds over their dead, like the Bogos. They number about 16,000, and are divided into two tribes, the "Blacks" and the "Reds." These last, forming the southern division, by a strange contrast, cultivate a blackish soil, whilst the former, or northern division, occupy a reddish soil. Their language is identical with that of their slaves, the conquered Tigré, who possess no rights, in spite of the precepts of Mohammedanism, which confers the title of brothers on all the faithful. On the death of a Mareas the head of every Tigré family is bound to present a cow to his heirs. The Mareas exceed all other races in aristocratic pride. Death without defence is the only punishment they will receive, for they refuse to humble themselves by appearing before any tribunal and offering any excuses for their conduct. If the blood of the tribe is sullied by an illegitimate birth, father, mother, and child are all destroyed.

THE HABABS.

North of the Mensas and Mareas are the Az-Hibbehs or Hababs, pastors wandering over the mountainous plateaus bounded east by the Sahel plains of the Red Sea, and west by the Barka Valley. These people also are connected with the Abyssinians by their language—which, like the Tigré, is a Ghez dialect—as well as by their traditions. They were Christians, at least in name, down to the middle of the nineteenth century, but on adopting a nomad life they also conformed to the religion of the surrounding tribes. Divided into small republics, their only wealth consisting of cattle, the Hababs roam amongst the surrounding mountains and plains in search of water and pastures. During the winter the lonely Nafka plateau, which may be considered the centre of the Habab country, is completely abandoned to the wild beasts.

Nevertheless, the remains of buildings and graves disposed in three or four circular stages prove that this region was once permanently occupied. These ruins are attributed to the Bet-Maliehs, or "People of the wealthy abode," a small tribe believed to be of aboriginal extraction. Like the Habab people, the elephant of this region is also nomad; during the winter rains its herds frequent the eastern slopes of the plateau bordering the Sahel, in summer returning to the Nafka heights on their way westwards to the Barka Valley and the slopes of the Abyssinian mountains.

THE BENI-AMERS.

In the lowland districts north, west, and east of the Hababs dwell the Beni-Amers, who appear to be of mixed Abyssinian and Beja origin, speaking a dialect half Beja, "Bedouin," and half Tigré, locally known by the name of *Hassa*. Amongst the Nebtabs of the Sahel—all nobles, and recognised as such by their neighbours—both languages are also current. The Abyssinian element is more strongly represented according as the Beni-Amer tribes approach the great plateau, and those living in the plains of Samhar, near the Mensas, speak Tigré almost

exclusively. They marry the women of the Bogos and other mountain tribes, but are too proud to give their daughters in marriage to the Abyssinians. In these regions of transition, as well as in the slave-markets surrounding the plateaux, strikingly different types are met, such as the broad faces and high cheekbones of the Agau, and the high forehead, hollow cheeks, delicate nose, and savage eye of the Arabs, or of those assimilated to the Arabs, such as the Hadendoas and Shaikiehs.

THE SAHOS.

The Sahos or Shohos, occupying the slope of the Hamassen plateau west of Massawah, live by cattle-breeding and acting as guides between the seaport and the highlands. Some authors look upon them as true Abyssinians, but most explorers connect them with the Afars, or even with the Gallas. Their dialects, of Afar origin, resemble those spoken throughout the southern region as far as the Awash River. Although very frugal, they have full features with a fresh and healthy complexion. Like all the other peoples of the coast, they are mostly Mohammedans; nevertheless, near the plateau there are some who intermingle Christian traditions with their Mussulman faith, whilst a few villages, where the missionaries reside, have become Catholic.

Although nominally subject to the "King of Kings," the Shohos are really independent, even the chiefs possessing merely a nominal authority over their subjects. All the members of the tribe have an equal voice in the assemblies, and anyone trying to dictate to another would be excluded or put to death. The observance of their hereditary customs and the respect of public opinion, unite the Shoho tribes in a compact nationality. The law of blood for blood is rigidly observed; a murderer must either die or pay the price fixed for a life, and if the assassin has no relations to answer for him, his tribe draw lots for a substitute. In some instances, however, the family of the murderer consents to his execution, and in this case his parents and friends assist in putting him to death, so as to share in the responsibility of his punishment.

THE SHANGALLAS.

West of the Abyssinian plateaux, on the spurs facing the Atbara, the Rahad, the Dender, the Blue River and its affluent the Tumat, the Abyssinian peoples no longer intermingle with the Arabs and Afars, but with Negro elements. The name of *Shangalla*, or *Shankalla*, by which these natives occupying the western slope of the mountains are known, is indiscriminately applied to numerous tribes, differing in appearance, language, and origin, their only resemblance lying in their almost black skins, relatively barbarous condition, warlike and slave-hunting propensities. From time immemorial it has been and still continues to be the custom of the Abyssinian barons living near the Shangallas to descend into the forests with their marauding hordes, plundering and killing those who dare to defend themselves,

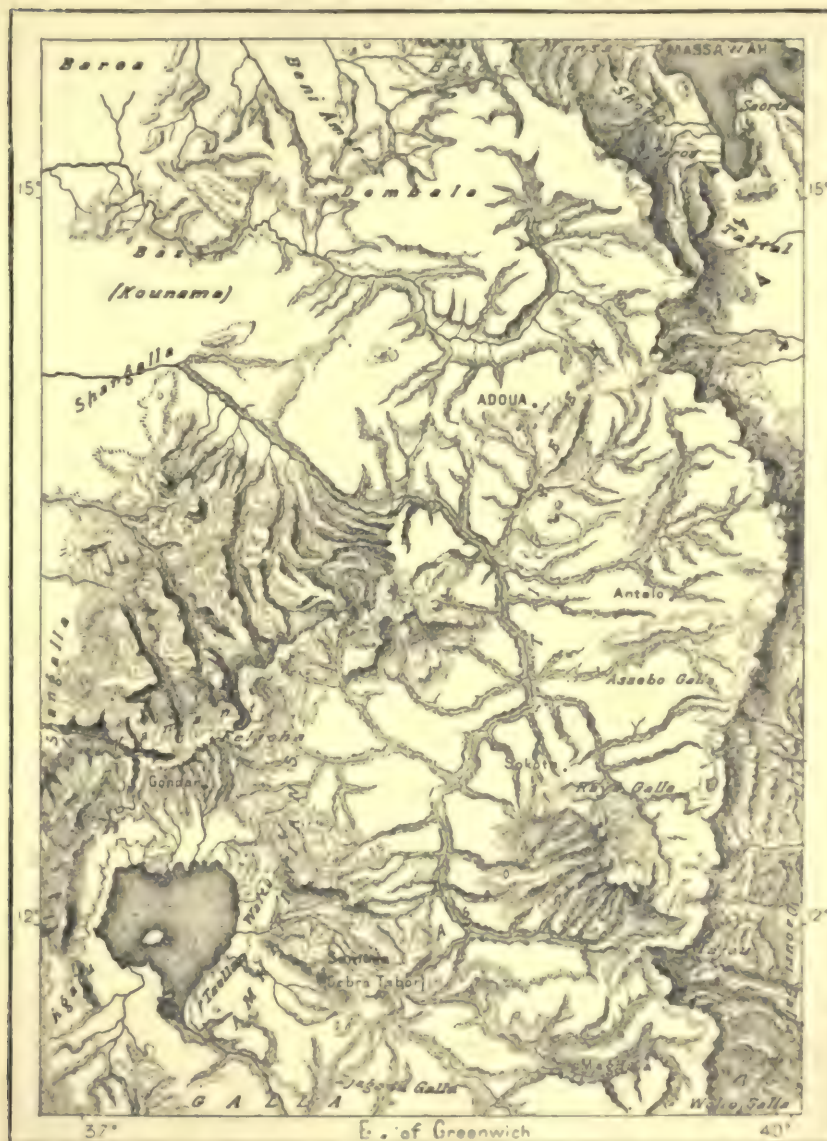


SHAIKIEH ARAB AND ETHIOPIAN FEMALE SLAVES AT KHARTUM.

and presenting their captives to their king, or selling them to the slave merchants. Near the plains the Shangallas have other enemies to fear, the Arabs, who have also reduced a considerable portion of the black population to slavery. Lastly, the

Fig. 48.—INHABITANTS OF ABYSSINIA.

Scale 1 : 3,500,000.



80 Miles.

land has also been frequently wasted by the invasions of the Gallas or Ilm-Ormas from the south. Some of these Gallas, however, such as those west of the Abai River, and those in the province of Mecha, have settled in the districts depopulated by them.

THE TIGRÉ AND AMHARAS.

The civilised Abyssinian highlanders are divided into two main groups, differing from each other in speech and traditions—the Tigré nation, occupying the north-east highlands, and the Amharas and Shoas of the western and southern regions. The features of the Tigré, who have given their name to their province, are perhaps somewhat more characteristic than those of the other Abyssinians, from whom, however, they cannot easily be distinguished. But they speak the Tigrīña, a peculiar form of speech derived from the Ghez, the classical language, in which are written all the religious works and liturgies of the Abyssinian nation. Like the Tigrié (Tigré, Tigrāi), a kindred dialect current amongst the peoples of the northern slopes along the headstreams of the Barka, the Semitic roots of the Ghez are found more or less intermingled in the Tigrīña, with Galla and other elements of foreign origin. The “Bedouin” language of the Hababs is a well-preserved form of Ghez, and many Abyssinian theologians have resided amongst these humble highland shepherds in order to study the origin of their sacred language. The Hassa, another dialect of the same family, differing slightly from Tigrié, has survived amongst the Beni-Amers of the Samhar plains on the coast of the Red Sea. In this direction the Abyssinian linguistic domain is being gradually encroached upon by the Arab, just as the Christian religion itself has recently yielded to Mohammedanism.

Of the two chief Abyssinian languages, the Tigrīña and the Amhariña, the latter, also derived from Ghez, predominates, thanks to the higher civilisation and political preponderance of the Amhara people. The Amhariña is the language of trade, diplomacy, and literature, possessing a special alphabet of thirty-three letters, each with seven forms, or two hundred and fifty-one characters altogether, written from left to right, like the European languages. Whole libraries of books have been written in this tongue. The most important works are found in Europe, especially in the British Museum, which possesses as many as three hundred and forty-eight, obtained chiefly from the collections of King Theodore. Most of the Amhariña books have been written for the edification of the faithful; but magic, history, and grammar are also represented in the national literature. Science already possesses three dictionaries of the Amhariña language, the last a philological work of great importance on which d’Abbadie spent more than twenty-five years. The Tigrīña dialects possess no literature.

THE ABYSSINIANS.

The inhabitants of the various Tigré and Amhara provinces present striking contrasts according to their locality, trade, food, and racial crossings. But apart from the extremes, varying from the pure Negro to the European type, the Abyssinian on the whole may be considered as possessing shapely limbs and regular features. They are mostly of middle height, broad-shouldered, with somewhat slender body, and of very graceful action and carriage. They wear the *shuma*, a

garment resembling the Roman toga, which they fold gracefully round the body in divers fashions. In general the forehead is high, the nose straight, or even aquiline, the lips thick, the mouth somewhat pouting, and the chin pointed. The head is dolichocephalous, and covered with slightly frizzled, almost woolly, hair, often arranged in little tufts, which the Mussulman slave-dealers call "peppercorns." Like most other Africans they are rarely bearded, but in common with them have the habit of lowering the eyelids, which often gives them a treacherous and deceitful appearance. The colour of the skin varies greatly, from the deep black of the Negro to the pale complexion of the Mediterranean coast peoples, but is generally of a darkish yellow hue, clear enough to admit of blushes being observed. Most of the women when young are very graceful, but their beauty does not last long; they are shorter than the men, their height, according to Hartmann, rarely exceeding from 4 feet 11 inches to 5 feet.

The Abyssinians, both men and women, are subject to internal parasites, probably due to the practice of eating raw flesh, common to all the natives, excepting those of the northern province of Seraweh, whose diet consists almost exclusively of vegetables. In the last century Bruce's account of these feasts of *brondo*, or steaks cut from the living animal and eaten with pepper and pimento, were discredited; but his statements have been confirmed by all subsequent explorers. To free themselves from these internal pests, the Abyssinians make decoctions of the kusso leaf, bitter barks, and various other herbs; but they prefer to expose themselves to this disorder rather than abandon their savoury *brondo*. Leprosy, amongst other diseases, is very common in the kwallas, and more especially in the Felasha villages. Like those of Europe and South America, the Abyssinian highlanders, and especially the women, suffer much from goitre. According to Dr. Blanc, an Englishman who was for some time a prisoner of King Theodore's, the women frequently die in parturition, whilst in the neighbouring countries they pass easily through this trial. Wounds heal slowly, the slightest contusion often causing bone diseases of long standing, although amputation of the arms and legs, and even the mutilations of eunuchs, are rarely mortal, and in general heal rapidly. The peoples of the upper plateaux dread the feverish atmosphere of the kwallas as much as Europeans, and rarely descend below a height of 3,000 feet during the rainy season. The danger these mountaineers run under the deleterious influence of this damp heat is the best safeguard of the lowlanders against the attacks of the Abyssinian marauders. When the "king of kings" has occasion to punish one of these lowland peoples, he despatches a band of Galla warriors, accustomed to a similar climate in their forests of southern Abyssinia. However, the elephant hunters and slave dealers, whose pursuits bring them to these regions, are said to brave the miasmas with impunity, protecting themselves successfully against the marsh fever by daily fumigations of sulphur.

Most European observers describe the Amharas and Tigrés as distinguished by their great intelligence, much natural gaiety, and easy address. Although untutored in elocution, they express themselves with a remarkable fluency, rendered the more impressive by their commanding height and appropriate gestures. Vain, selfish,

and irritable, they are easily led into foolhardy enterprises. Their ambition is insatiable, but when unsuccessful they resignedly accept their ill luck. The sad political state of Abyssinia fully accounts for the vices of its peoples. Continual wars put a stop to all peaceful labours; the soldiers live by plunder, the monks by alms; hence all work is despised and left to the women and slaves. Like the Egyptian fellahin, the haughty Abyssinians do not consider themselves degraded by asking for presents, remarking cynically, "God has given us speech for the purpose of begging." Amongst the Shohos the love of bakshish is pushed to such an extent that many of the chiefs are buried with the hand projecting from the grave, as if still soliciting from their tombs. Disregard of truth is another national vice, veracity being little respected in this country of theological quibblings, where each interpretation is based on a sacred text. "Lying gives a salt to speech which the pure truth never does," said an Abyssinian to d'Abbadie.

AGRICULTURE.

Although the Abyssinians rank as a "civilised people," their agriculture is still in a very rudimentary state; many of the ploughs have merely a stick or iron lance for the share, which tears up the soil without turning it over. After the seed is sown, the land is never touched till harvest time, whilst certain useful plants are left to grow wild. Even the harvest is neglected, and the gums, yielded abundantly by the acacias on the Sahal and Samhar slopes of the Abyssinian chains, are gathered only in the immediate vicinity of the trade routes between Massawah and the plateaus. However, numerous varieties of vegetables are known to have been introduced into the country, notably the vine, at the period of its trade with Byzantium. During the present century Schimper has spread the culture of the potato, the German missionaries have brought over the red cabbage, and Munzinger has introduced several new plants into the country of the Bogos. Were the arable lands cultivated, like those of the more flourishing European colonies, the Abyssinian highlands might supply the markets of the world with coffee and quinine, and the valleys of the advanced spurs might rival the United States in the production of cotton.

THE ARTS AND INDUSTRIES.

The industries, properly so called, are in the same state of neglect as agriculture, although the Abyssinians themselves are sufficiently intelligent and skilful to utilise their own raw materials instead of exporting them to foreign manufacturers. Incessant wars compelling all the able population to bear arms, and the contempt for labour and workmen existing in all feudal and slave countries, have prevented the Abyssinians from developing their natural skill and taste for the industries. All the masonry, carpentering, and upholstering, as well as the manufacture of tools, weapons, and instruments, are left to the Felasha Jews, who are rewarded for their services by being hated and persecuted as *budas*—that is, were-wolves—or else

as sorcerers. A few families of Hindu extraction, and naturalised Armenians, ornament the shields, swords, and saddles with filigree work, make trinkets, and prepare the jewels, necklaces, and bracelets of the women; whilst a few European workmen, residing at the court, also contribute somewhat to the industrial products of Abyssinia. The fine cotton tissues used for the *shamas* and other articles of clothing are manufactured in the country, but the red and blue cotton fringes with which the borders are ornamented are usually imported. Like the Mohammedan peoples of the surrounding districts, the Abyssinians are very skilful in the preparation of all kinds of leatherware, such as shields, saddles, and amulets. Most of the people are their own tailors, and bleach their own cloth by means of *endot* seeds, which answer the purpose of soap. It is a point of honour amongst them on feast-days to wear clothes of spotless whiteness.

Art, in the strict sense of the term, is wrongly supposed to be unknown to the Abyssinians. Most European explorers speak in very contemptuous terms of the work of the native painters, and certain barbarous frescoes are doubtless of a character to justify their sneers. Nevertheless, the Abyssinian school, sprung from the Byzantine ecclesiastical art, has produced several works which show at least imagination and vigour. In the ruins of the palace of Koskoam, near Gondar, remains of Portuguese frescoes and native paintings are still to be seen side by side, and here the foreign artists, with their insipid saints, scarcely compare favourably with the natives. Nor are there lacking in Abyssinia innovating artists who protest by their bold conceptions against the stagnation of the traditional rules. They even treat historic subjects, and produce battle-scenes, painting the Abyssinians in full face, and their enemies, such as Mohammedans, Jews, and devils, in profile. They also display much skill and taste in bookbinding, copying and illuminating manuscripts. As to the *azmari*, or strolling minstrels, they live on the bounty of the nobles, whose mighty deeds it is their duty to sing. Hence their poetry is a mere mixture of flattery and mendacity, except when they are inspired by the love of war. Abyssinian bards recite before the warriors, inspiring their friends and insulting their adversaries, whilst female poets mingle with the soldiers, encouraging them by word and deed.

RELIGION AND EDUCATION.

In spite of the encroachments of Mohammedanism, which besieges the Abyssinian plateaux like the waves of the sea beating against the foot of the rocks, the old religion of "Prester John" is still professed. Introduced in the fourth century, at the period when the political preponderance belonged to Constantinople, and communications were easily established between Aksum and "Eastern Rome" by way of the Red Sea, the Arabian peninsula, and Syria, the doctrine of the Abyssinian Christians is one of those which at one time contended for the supremacy among the Churches of Asia Minor. The Abyssinian Christians, like the Copts of Egypt, jointly forming the so-called "Alexandrian Church," are connected with these primitive communities through the sects condemned by the council of Chalcedon in the middle of the fifth century. The Abyssinian "Monophysites," following the doctrines of

Dioscorus and Eutychius, differ from the Greek and Roman Catholics by recognising one nature only in Jesus Christ, and in making the Holy Ghost proceed from God the Father alone. Christ, however, although he became man, is none the less considered as God, thanks to his double or triple birth, the manner and succession of which have given rise to so many endless disputes between theologians, and have even caused sanguinary wars. Gondar and Aksum have often had recourse to arms to settle the vexed question of the "double" or "triple birth." Following the interpretations, the words, at one time taken in the proper sense, at another translated into a mystic language, completely change their value; and European Catholic or Protestant missionaries have often been able to explain, to the applause of their hearers, that there was no essential difference between the Abyssinian faith and that which they wished to introduce. For the Roman Catholics especially the process is easy enough, for have they not, like the Abyssinians, the worship of Mary, the veneration of images, the intercession of the saints, fasts, purgatory, indulgences, and begging communities? Received like a native, Bermudez, the first Catholic missionary, who arrived in Abyssinia about 1525, caused himself to be consecrated by the Abyssinian primate, and became for a time his successor.

Meanwhile the Mohammedan Gallas, led by Ahmed Graneh, that is, "the Left-handed," who possessed firearms, invaded Abyssinia, destroying its armies, sacking and burning its villages, and the empire would probably have been destroyed, had not 400 Portuguese, led by Christopher de Gama, son of the famous navigator, hastened to restore the balance of power. These events took place in 1541. The Gallas were beaten, but the Portuguese demanded as the price of their services a fief comprising a third part of the kingdom, and the conversion of all the Abyssinians to the Catholic faith. Thus began the religious wars between the Alexandrian and Roman sectaries. One of the first Jesuit missions was compelled to leave the country before securing the recognition of the Pope's authority; but a second was more successful, and in 1624 the "king of kings" abjured the Monophysite faith and issued an order for the universal adoption of Romanism. The Inquisition was introduced, and revolts, barbarously suppressed, stained the kingdom with blood. For eight years Abyssinia was officially a province of the Catholic world; but after a terrible massacre of the peasants, the Emperor Claudius, wearied of bloodshed, issued an edict of toleration, and all the Abyssinians soon returned to the old faith. The Catholic priests were exiled or died violent deaths, excepting the Patriarch, whom the Arabs captured, and for whom they obtained a heavy ransom from the Portuguese of Goa.

During the present century the Catholic and Protestant missionaries have returned to Abyssinia, but being regarded with suspicion as strangers, have never been tolerated for any length of time. The Abyssinians are usually very indifferent to religious matters, and would readily allow churches of divers denominations to be built by the side of their own, but they fear lest conversion might be the forerunner of conquest. Prince Kassa, afterwards the famous King Theodore, is stated to have said, "The missionaries will be welcome in my kingdom, on the condition that my subjects do not say, 'I am a Frenchman because I am a Catholic,' or 'I

am an Englishman because I am a Protestant.' " Later on he even forbade foreigners to preach, tolerating them only as artisans. His own fate justified the sentiment he so often repeated—"First the missionaries, then the consuls, and then the soldiers!" Abyssinian territory is now interdicted to priests of foreign religions, and Europeans, like Schimper, dwelling in the country, have been obliged to adopt the national religion.

Till recently the Mussulman propagandists seem to have been more successful than the European missionaries. Nearly all the frontier peoples had embraced Islam, retaining but a vague recollection of their Christian faith, and even in the interior the Mussulmans threatened to acquire the ascendancy. According to some writers, they already formed a third of the nation, and in the towns they prevailed through their numbers, influence, and wealth, whilst all the trade was in their hands. In virtue of the fundamental law of the country, they failed to attain political power only because rulers must profess the Christian religion; but in the middle of the century the master of the country, Râs Ali, was seen to abjure Mohammedanism only with his lips, whilst distributing offices and the plunder of the churches to the disciples of Islam. The reaction against Mohammedanism was principally caused by the invasion of the Egyptian armies, when the hatred of foreign enemies reflected upon those of the interior. An order for a general conversion was issued, and all the Abyssinian Mussulmans were obliged apparently to conform to the established Church, and to wear, under pain of exile, the *mateb*, or "sky-blue" cord, the Christian badge. The Mohammedans who remained faithful to their religion fled to the frontier states, especially to Galâbat, on the route to Khartum. Abyssinia, the refuge of Mohammed's disciples in the fifth year of persecution, has not, therefore, justified the praise the Prophet awarded it in calling it "a country of uprightness, where no man falls a victim to injustice."

The *abuna*, that is "our father," head of the Abyssinian clergy, is not an Abyssinian, for since the reign of Lalibala, some seven centuries ago, this prelate has always been a foreigner. It was doubtless feared that he would acquire too much power in the country were he a native of royal descent; hence a Coptic priest is sent them by the Patriarch of Alexandria in return for a considerable sum of money. Thus his precious life is most carefully guarded to save further expense to the State, and on the death of an *abuna* the pontifical chair has often remained empty for many years. The duties of this high priest consists in ordaining priests and deacons, in consecrating altars, and in excommunicating criminals and blasphemers. For these services he possesses an entire quarter of Gondar, and receives the revenues of numerous fiefs, besides perquisites, regulated by a strict tariff. Although highly venerated by the natives, his power is not equal to that of the *negus*; and Theodore, when excommunicated by the *abuna*, was seen to coolly draw a pistol and cover the prelate, demanding a blessing, which it is needless to add "the holy father" hastened to grant him.

The *abuna's* power is held in check by the king's political spies, as well as by the *echagheh*, the national priest and a religious rival, his equal in dignity and power of excommunication, although he cannot confer orders; he also possesses a

quarter of Gondar. The echagheh governs the numerous convents of Abyssinia, and rules over the numerous *dabtara*, or "literati," who form the best instructed and most influential class of the country. They are laymen, but they usually possess more authority in the Church than the priest himself. The *dabtara* enjoys the usufruct of the ecclesiastical fiefs; he hires by the month, pays, reprimands, or dismisses the priest who celebrates mass, and often occupies the post of parish priest, which is quite a temporal office in Abyssinia. He composes the new hymns for each feast, and often introduces sarcastic remarks levelled against the bishops, and occasionally even warnings against the king.

Excepting the high dignitaries, the Abyssinian priests are not bound to celibacy, but are forbidden to make a second marriage. There are also numerous religious orders, comprising about 12,000 monks, without counting the nuns, who are mostly aged women driven by domestic troubles to retire from the world. Deposed princes, disgraced officials, and penniless soldiers also seek a home in the monasteries. A large part of the land belongs to the priests and monks, and would lie fallow were not the peasantry compelled to cultivate it.

The churches and convents are the schools of the country, and with the exception of those chosen from the *dabtara* class, all the teachers are priests or monks. They teach choral singing, grammar, poetry, and the recitation of the texts of their sacred books and commentaries, the classic lore of the Abyssinians being limited to these subjects. But although restricted, education is at least gratuitous, the teacher's duty being to give voluntarily to others the instruction imparted to him in the same way. It is also the duty of the ecclesiastics to give food and shelter to whomsoever asks it. Convents and even the ecclesiastical domains were formerly inviolable places of refuge; but degrees of sanctity have been gradually established in these refuges, and at present there are very few from which the sovereign cannot tear his victim and deliver him up to the executioner. Many convents which formerly attracted crowds of pilgrims are now no longer visited. A few, however, are still visited for the combined purpose of worship and trade, every place of pilgrimage being at the same time a "camp-meeting."

The Abyssinian theologians, more versed in the Old Testament than the New, are fond of justifying their surviving barbarous customs by the examples supplied by the lives of their pretended ancestors, David and Solomon. The bulk of the faithful, although far from zealous, and extremely ignorant of their tenets, rigidly observe the outward forms of their religion. They submit to the penances imposed by their confessors, purchase pardon for their sins by almsgiving to the Church, and observe the long fasts ordered them, unless indeed they can afford to pay for a substitute. They have two Lents, the most rigorous lasting forty-five days, besides two days of the week being set apart for the ordinary abstinence. As in Russia and Rumania, more than half of the year consists of days of feasts or fasts, apart from those set aside for the celebration of births, deaths, and marriages. •

Every man has a baptismal and ordinary name, the former taken from their national saints, the latter composed of the first words spoken by his mother after his birth. The chiefs have a third name, consisting of their war-cry. Religious

marriage rites, which are also celebrated by communion and regarded as indissoluble, are of rare occurrence, not one in a hundred unions being solemnised by a priest. Legally the husband or wife can only be divorced three times, but in reality they dissolve the marriage as often as they please, and in this case the father takes the sons, the daughters remaining with the mother. In the case of a single child, if under seven he goes to the mother, but if older to the father. Of all their religious practices the most important are the funeral rites. The most upright man would be thought unworthy to enter heaven did his relations not pay for masses to be said for his soul and for a splendid funeral banquet. The poor people pinch themselves during lifetime to save enough to acquit this sacred duty of the "teskar." As in Christian Europe, the enclosures surrounding the churches are used as cemeteries; and the conifer trees, such as the cedar, yew, and juniper, planted on the graves of the Abyssinians, are said to be also considered in the East as sepulchral trees.

GOVERNMENT.

The royal power is by right absolute, although in practice restrained by force of custom, and especially by the powers of a thousand restless vassals and feudal communities of landed proprietors armed with shields and javelins, whom the least change in the political equilibrium might league against the king. Until the plateaux are connected one with the other by easy routes over the mountains and through the gorges, the country will not obtain the cohesion that it lacks, and Abyssinia will be condemned to the feudal system. Each isolated mass covered with villages or hamlets, but cut off by deep ravines, constitutes a natural fief, held in awe by an amba, or "mountain fort," denoting the dwelling of the master. From this eyrie he overlooks the surrounding lands, calculating what return the crops of the fields below will yield him, and watching for travellers, on whom he levies black-mail. However, the sovereign endeavours to grant these great military or ecclesiastical fiefs only to members of his family or to devoted servants. Besides, he surrounds himself with a permanent army of *wotloader* or mercenaries, now armed with modern rifles, and "accustomed to stand fire," like the Egyptian soldiers, which enables him to dispense with the support of the restless feudatories or the free landholders. He also endeavours to keep at his court the vassals he most mistrusts. However, the modern history of Abyssinia shows with what rapidity the power shifts from suzerain to vassal. Although these *negus-negest*, that is, "kings of kings," these sovereigns of Israel, all endeavour to prove their descent from Solomon and the Queen of Sheba, mother of Menelik, first king of Ethiopia, and bear on their standards "the Lion of the tribe of Judah," they have not sufficient time to impress their subjects with awe. In reality, the king of Abyssinia is master only of the ground on which his army is encamped, and of the more exposed towns, where his mounted troops can show themselves at the slightest alarm. Such is the reason why the present sovereign, like his predecessor Theodore, has no other capital than his camp, where the first stroke of the war-drum suffices to put the whole army on the march.

ADMINISTRATION OF JUSTICE.

As the Abyssinian sovereigns are theoretically autocrats, so the governors of provinces, landholders, and the *shum* or "chiefs" of each village, have also the right to do as they please, being responsible only to their superiors. Nevertheless there is a code of laws, the "King's Guide," attributed to Constantine, and which certainly dates from the period when Byzantine influence preponderated in the Eastern world. According to this code, which contains many ordinances of the Pentateuch and extracts from the laws of Justinian, the father has the right of life or death over his children, as the king has over his subjects. The rebellion of the son against the father, or of the vassal against his lord, is punished by blinding or death; the blasphemer or liar, taking the name of God or of the king in vain, is punished with the loss of his tongue; the thief loses his right hand; the assassin is delivered up to the family of the murdered man and killed in the same way as he disposed of his victim, but if the crime was involuntary, blood-money must be accepted. The amputated limbs of prisoners are always baked under their eyes and returned to them steeped in butter, so that they can preserve them to be buried with the rest of the body, and thus rise un mutilated on the last day. Smoking is forbidden, "because tobacco originated in the tomb of Arius," and fanatic chiefs have caused the lips of transgressors to be cut off. Chiefs rarely condemn anyone to prison, which consists of a chain with a strong ring at each end, one being fixed to the prisoner's right wrist, the other to the left hand of his gaoler, who thus becomes a captive himself; accordingly he strives promptly to get rid of his unwelcome companion either by a compromise or by an absolute judgment. When one Abyssinian wishes to complain of another, he attaches his toga to that of his adversary, who cannot get released without pleading guilty. He must follow his accuser before the judge, and, both uncovering the back and shoulders so as to await the blows which will fall upon one or the other, beg for the magistrate's decision. Each conducts his own defence, as it is thought disgraceful to employ a third person to plead, the title of lawyer being considered an insult. The Abyssinians often appeal to a child to judge between them: being himself innocent, the child is held as the best judge of good and evil. After having gravely listened to the suitors and the witnesses, he pronounces sentence, which all receive with the greatest deference, and which is occasionally accepted as a definite judgment between the parties.

SLAVERY.

Slavery still exists in Abyssinia, but it affects the blacks alone, who constitute but a small portion of the population. The master has not the right of life and death over his slave, and would even be liable to capital punishment by selling him. After some years' service the slave usually receives his liberty, together with sufficient implements and money necessary for his support. On becoming a freedman he increases the importance of his former master. Before their enforced conversion all the traffic in human flesh was carried on by the Mussulmans. Like

the American abolitionists, but for an entirely different purpose, they had established a "subterranean route," that is to say, a series of secret depôts underground or in the woods, stretching between Gondar and Metamneh. The convoys of slaves were carefully imprisoned all day in these depôts, passing from one to the other only under cover of night.

TOPOGRAPHY.

The natural centre of Abyssinia, which has also at various epochs been the seat of empire, is the fertile basin whose central depression contains the waters of Lake Tana. The mean height of this favoured region exceeds 6,600 feet; it forms the *voïna-dega* zone, which corresponds to the temperate zone of Europe, although enjoying a more equable climate and a richer vegetation. Thanks to these happy conditions, the land yields the most abundant and varied crops in Abyssinia, and here have been built the most populous towns, which in this feudal region are elsewhere extremely rare. Another great advantage of this district is its relative facility of access. From Khartum to Lake Tana the direct route rises gradually, crossing only one steep ridge, that of Wali-dabba, north-west of the great lake; but it would be difficult to follow the route made through the gorges of the Blue Nile, an immense semicircle described by the river beyond Abyssinia into the country of the Ilm-Ormas and Bertas.

GONDAR.

One of the cities of the central Abyssinian basin is *Gondar*, or rather *Gucendar*, usually designated as the capital, although it is merely the chief religious centre. Gondar is not of ancient origin, dating only from the beginning of the seventeenth century, although it has already more ruined buildings than houses in good condition. Most of the churches were destroyed by Theodore in a fit of rage, and on the rounded hill overlooking the town from the north are the remains of a *gimp*, or "stronghold," which, in spite of its dilapidated condition, is still the finest building in Abyssinia. Its reddish sandstone walls with basalt parapets, round towers, square keep, and lofty gateways in the Portuguese style, give it an imposing appearance; but it is being gradually overgrown by trees and shrubs, while entire portions have been systematically demolished. "Since we must no longer build monuments," said a queen in the middle of this century, "why should we allow those of others to exist?" Seen from afar at the foot of its picturesque ruins, commanded by churches, and dotted with clumps of trees, Gondar presents the appearance of a picturesque European town, with its amphitheatre of hills, its silvery rivulets winding through the prairies of the Dembea, and the glittering surface of the neighbouring lake.

Gondar is situated at a height variously estimated at from 6,300 to 6,800 feet, on the southern and western sides of a gently sloping hill. Its houses are built, not in groups so as to form a town properly so-called, but in separate quarters, between which intervene heaps of rubbish and waste spaces, where leopards and

panthers occasionally venture at night-time. Although it could easily accommodate some 10,000 families, its present population is estimated at only from 4,000 to 7,000 Christians and Jews, each occupying a special quarter. The houses of the rich citizens are mostly one-storied round towers, with conic roofs thatched with reeds; the domestic animals occupy the ground-floor, which also serves as a store for utensils and provisions. Being an ecclesiastical centre, Gondar has no foreign

Fig. 49.—GONDAR.

Scale 1 : 65,000.



trade beyond what is required for the local wants. Most of the mechanics, smiths, masons, and carpenters are Kamants and Jews. For five months in the year Gondar would be completely cut off from the southern provinces, but for the bridge built by the Portuguese over the Magech, the chief river of the plain of Dembea, which has hitherto resisted all the inundations. South of Gondar are the villages of *Fenja* and *Jenda*, which lie in a well-cultivated district.



THE GIMP, AT GONDAR.

CHELGA—AMBA-MARIAM—IFAG.

Towards the north-western angle of the Dembea plain are the scattered hamlets forming the town of *Chelga*, which, though less famous than Gondar, is of more commercial importance. Lying near the water-parting between the Blue Nile and the Atbara, it is frequented by the Abyssinian merchants and the traders from *Galabat* and *Gedaref*, who reach it from *Wohni*, the first station on the Abyssinian frontier. In the upper valley of the Goang, which flows to the Atbara, are beds of excellent coal, disposed in layers some two to three feet thick, and very easy to work. From the plateau which rises west of the town to a height of over 8,800 feet, a view is commanded of the vast circle of hills and valleys enclosing Lake Tana, the Tsana of the Tigré. At the foot of the basalt crag of Gorgora, rising near the north-western shore of the lake, stands the large village of *Changar*, which possesses a port serving as the outlet for Gondar, Chelga, and other towns of the province.

The only communication between the plain of Dembea and the riverain districts east of the lake is by a defile, in which stands the custom-house of *Ferka-ber*, much dreaded by travellers. Beyond this post the towns and villages belonging to this lacustrine region are built away from the banks at a considerable height above the bed of the streams. *Amba-Mariam*, or the "Fort of Mary," with its famous church, stands on a level and treeless table-land, at whose base the villages of the district of *Emfras* nestle amongst the tufted vegetation. *Ifag*, or *Eyag*, forms a group of villages encircling the foot of a barren volcanic rock some 1,600 feet high, which commands from the north the abrupt plateau of *Beghemeder*. Situated at the northern extremity of a fertile plain watered by the copious rivers *Reb* and *Gumara*, and commanding the narrow passages which wind round the base of the mountains at the north-eastern angle of the lake, *Ifag* is an important commercial emporium with a central custom-house. The caravans stop and reform at the town of *Darita*, farther east. The plains of *Fogara*, stretching southwards, are said to produce the finest tobacco in Abyssinia, while also yielding rich pasturages for the numerous herds. Like *Koarata*, farther south, *Ifag* was formerly celebrated throughout Abyssinia for the excellence of its wine, obtained from plants introduced by the Portuguese; but the vines, which generally grew to a gigantic size, nearly all perished in 1855 of oïdium, at the same time that the European vineyards were wasted by this destructive fungus.

DEBRA-TABOR.

South of the plains of *Fogara* stretches a ridge running east and west, and overlooked from the east by the cloud-capped cone of Mount Guna. This broad ridge, covered with a thick layer of black earth and furrowed by the rivulets flowing from the marshy sides of Guna, is the plateau of Debra-Tabor, or "Mount Tabor," so-called from a church formerly a place of pilgrimage, but which, since the time of Theodore, has become the chief residence of the Abyssinian kings. From a

strategical point of view the position has been admirably chosen. To the west stretch the riverain plains of Lake Tana, the most fertile in the kingdom. From the summit, exceeding 8,600 feet, on which his palace is perched, the sovereign overlooks the lands which furnish his army with supplies. From this point he can easily reach the Upper Takkazeh valley towards the east, or the valley of the Abaï and the routes of Shoa to the south. The capital of a country engaged in perpetual warfare could not be more fortunately situated. But the royal camping-ground has often been shifted on the plateau of Debra-Tabor.

The village of Debra-Tabor, where the "king of kings" often resides during the rainy season, bears the name of *Samara*; some miles to the north-west is the village of *Gafat*, formerly inhabited by blacksmiths who were reputed sorcerers. Theodore had assigned it as a residence for a numerous colony of Protestant

Fig. 50.—DEBRA-TABOR.

Scale 1 : 350,000.



missionaries, employed, not for the evangelisation of the inhabitants, but for the manufacture of harness, weapons, and materials for war. Gafat was at that time the arsenal of Abyssinia.

The watercourses of Debra-Tabor flow to Lake Tana through the Reb, which latter river, not far from Gafat, forms a superb cascade nearly 70 feet high. West of Debra-Tabor, on a lowland promontory of the plateau, are the ruins of the Castle of Arengo, the "Versailles of the Negus," built beneath some large trees, on the edge of a precipice over which falls a cascade, its waters disappearing in the virgin forest below. Thermal springs from 100° to 107° F. abound in this region. The most frequented are those of *Wanziglich* in the valley of southern Gumara. The neighbouring village is the only place in Abyssinia where vines have been introduced.

MAHDERA-MARIAM—KOARATA.

The basin of the Gumara, like that of the Reb, has also a town famous in the local records. *Mahdera-Mariam*, or "Mary's Rest," stands between two affluents

of the Gumara on an enormous basalt rock, "grouping its garden-encircled houses around the clumps of junipers which mark the sites of churches." The town is surrounded on three sides by chasms, but connected with the neighbouring plateau on the fourth by a narrow isthmus which might be easily fortified. Mahdera-Mariam is no longer a royal residence, but its two churches—those of the "Mother" and the "Son"—are still much frequented by pilgrims, and numerous merchants visit its fair. Two distinct quarters were till recently occupied by Mussulmans,

Fig. 51.—MAHDERA-MARIAM.

Scale 1 : 20,000.



who differ from the other Abyssinians merely by their peaceful and business-like habits. The hot springs of Mahdera-Mariam are retailed by the priests, who also practise the medical art.

The most important commercial town on the eastern bank of Lake Tana is *Koarata*, situated about six miles north-east of the spot where the Abaï emerges from the lacustrine basin, and near the mouths of the Gumara and Reb. Were Abyssinia well provided with routes, this town would form the converging point for the routes of many river valleys. A rounded basalt hill stands in the middle of the plain, its western spur projecting into the lake. The town covers a con-

siderable extent; the dwellings of the better classes are surrounded by large gardens; the streets form shady avenues, whence are perceived the conic roofs of the houses amidst the dense foliage of cedars, sycamores, and fruit trees. Koarata, "the pleasantest town in Abyssinia," was till recently the most populous. At the time of D'Abbadie's visit it numbered some 12,000 inhabitants, which in 1864 were reduced to 2,000 according to Raffray, and from 800 to 1,000 according to Stecker, whilst in 1881 all the Mussulmans were forcibly exiled. Nevertheless it is still the centre of a brisk trade, and the numerous *fankuas* hauled up on the beach attest a considerable movement between Koarata and the towns dotted round

Fig. 52.—KOARATA AND SOUTHERN SHORE OF LAKE TANA.

Scale 1 : 600,000.



12 Miles.

the lake. Koarata owes its importance as a commercial depôt to a venerable church, which was formerly a place of sanctuary respected even by the sovereign. On the roads leading towards the sacred hill, large trees designate the boundaries of safety, into which the bishop and the emperor are the only persons who dare venture on horseback. In the vicinity of Koarata are the red sandstone quarries which supply the stone used for the palaces and churches of Gondar. The coffee of this town is exquisite, far superior to that of the hilly *Zighé* peninsula, which is visible on the other side of the lake about 6 miles to the south-west, and which is one vast plantation. The town of Zighé was destroyed by Theodore.

DEBRA-MARIAM—ISMALA.

At the point where the lake narrows to escape through the rapid current of the Abaï, two towns face each other—*Debra-Mariam*, or “Mountain of Mary,” on the east, *Bahrda* to the west. Several villages, neater and more cleanly than those of the interior, follow in succession along the southern shore of the lake. The islet of *Dek*, some 16 square miles in extent, forms a low volcanic rock covered with tufted vegetation, and skirted by conic hills. Here the priests of Koarata have deposited their treasures; hence few explorers have received permission to visit this island, whilst that of *Dega*, consecrated to St. Stephen, is holy soil, forbidden to all profane visitors. *Matraha*, another holy island in Lake Tana, lies close to the north-eastern shore, and viewed from between branches of trees covered with the swinging nests of the weaver-bird, presents a most charming appearance. But the holiness of this island did not prevent Theodore from shutting up all its inhabitants in a monastery, which he then set on fire. To the south-east of Lake Tana, on one of its affluents, *Iskala*, the capital of *Abshafer*, is very much frequented for its hot springs and mineral waters.

MOTA—DIMA—BISHARA.

Beyond the basin of Lake Tana the Abyssinian towns belonging to the watershed of the Abaï or Blue Nile are mostly situated on the plateau or on the broad grassy terraces of the extensive plains bordering the right bank of the river, and affording pasturage for herds of large cattle and horses. *Mota*, one of the most important markets in the “kingdom” of Gojam, is situated on an elevation at the extremity of the plateaux which bound the northern base of the Talba Waba Mountains; its regularly built houses are, like those of Mahdera-Mariam, surrounded by leafy trees, while a large park with long symmetrical avenues encircles the church. Below the terraces of Mota are the ruins of a bridge, which spanned the Abaï River with nine arches, of which the central arch, some 66 feet broad, has been broken; but the merchants have stretched a rope over the gap and manage to pass themselves and their commodities over this frail temporary substitute. Farther south, the village of *Karanco* and a few neighbouring hamlets are peopled with *Francis*, or *Frances*, that is to say, the descendants of the Portuguese soldiers who arrived in the sixteenth century with Christopher de Gama. *Martola-Mariam*, one of the local churches, the sculptures of whose interior are said by Beke to be of exquisite workmanship, is undoubtedly of Portuguese construction, although the people invest it with much greater antiquity.

Facing the eastern curve of the Abaï follow in succession the two religious towns of *Debra-Werk* and *Dima*, celebrated the former for its seminary, and the latter for the curious paintings in its church of St. George. *Debra-Werk*, built in amphitheatrical form on the side of a hill, possesses the highest and best-built houses of any other Abyssinian towns. *Bishara*, some miles south of Dima, is a

market-town greatly frequented by the Gallas. The surrounding district is the richest and best cultivated in Gojam, whilst its mixed Abyssinian and Galla population presents the most remarkable types of female beauty.

ASHFA—GUDARA—BASSO.

South of Mount Naba, highest peak of the Talba Waha Mountains, *Dambadsha* is much frequented by Mohammedan caravans, and possesses a sanctuary like that of Dima. Close by to the south-east stands *Monkorer*, the fortified residence of the King of Gojam, whilst farther to the north-west are the towns of *Mankusa*, *Buri*, and *Gudara*, the last mentioned standing on a volcanic crag near an intermittent lake and the sources of the Abaï. *Ashfa*, situated west of Gudara, in the midst of picturesque valleys, groves, and pasture lands, is the capital of the province of Agaumedar, which is peopled with Agau emigrants from Lasta. These populations, still half pagans although each village has its church, are the bravest, and the only Abyssinians who succeeded in evading the razzias ordered by the ruthless Theodore; in no other region of Abyssinia are the people more distinguished for courage and honesty. South of Gojam, in the vicinity of the Liben Gallas, are situated in two tributary valleys of the Abaï, close to its southern bend, the two neighbouring commercial towns of *Yejibbeh* and *Basso*, where Abyssinians and Ilm Ormas assemble to barter the products of their respective lands. The merchants of Damot and Kaffa bring a little gold-dust to Basso; hence the country where this precious metal is found is looked upon as a land of marvels by its covetous neighbours. Archbishop Bermudez, formerly the Catholic Abuna of Abyssinia, tells us that the El Dorado of Damot is also in the popular estimation a land of unicorns and griffins, where amazons contend with fabulous monsters, and the phoenix springs again from its ashes. At the end of 1883, a bridge was constructed by an Italian engineer over the Abaï, between Gojam and Gudru.

MAGDALA.

East of the Abaï, on a promontory above the upper valley of the Beshilo, stands the famous fortress of *Magdala*, which was, like Debra-Tabor, one of Theodore's residences, where he preferred death at his own hands whilst still free, and defying his English assailants. The amba of Magdala, rising to a height of 9,100 feet, or 3,300 feet above the Beshilo, resembles the rock of Mahdera-Mariam, although higher, more difficult of access, and of a more imposing aspect. Apparently insurmountable, the basalt cliff terminates westwards in an almost vertical crescent-shaped wall sloping north-westwards, where it culminates in an isolated peak. The portion of the plateau on which the fortress is built is connected with the southern part, which is occupied by the Gallas of the Wollo tribe, merely by a narrow path, all the other approaches to Magdala being blocked by fortifications. The upper platform, some two square miles in extent, bears the arsenals, barracks, prisons, magazines for corn and other provisions, and blockhouses for the king's women

and children ; cisterns and wells sunk in the soil supply it with water, whilst the fertile neighbouring valleys furnish provisions in abundance. It was at Magdala that Theodore kept for two years the English prisoners, for whose rescue an Anglo-Indian Army was dispatched in 1868. The fortress of Magdala, destroyed by the English, and afterwards conquered by the King of Shoa from an independent chief, and ceded by him to his sovereign, the King of Abyssinia, has since been restored, on account of its great strategic importance. It forms an advanced outpost in the Galla country, which is traversed by the shortest route to the kingdom of Shoa. At the eastern base of the rocks of Magdala, in a gorge commanded eastwards by

Fig. 53.—MAGDALA.

Scale 1 : 300,000.



other basalt promontories, stands the village of *Tanta*, or *Tenta*, peopled by merchants who supply the citadel with provisions.

DOBARIK—LALIBALA.

The Abyssinian towns standing on plateaux intersected by the gorges of the Takkazeh and its affluents are, like those of the banks of the Blue Nile, mostly of military or religious origin. Besides, they are few and far between, and some of them, after enjoying a long period of prosperity, have been abandoned and now contain more ruins than inhabited houses. The least populous region of this slope is that whose waters flow eastwards into the Takkazeh between the Beghemeder and Simen uplands. This province of Belessa has been traversed by few explorers on account of the lack of resources and the unhealthiness of the kwalla, which must be crossed amid the various sections of the plateau. But in Simen the chief towns of this mountainous province, *Inshatkab* the capital, *Faras-Saber* and *Dobarik*, near the Lamalmon Pass, have been frequently visited, thanks to their situation on

the route between Gondar and Massawah by way of Tigré. Dobarik is the place where Theodore caused two thousand persons to be massacred in cold blood in revenge for the death of his two English favourites, Bell and Plowden. North of Simen are scattered the villages of the province of Waldebba, one of the "holy lands" of Abyssinia, the personal property of the echaghé, and mainly peopled by monks.

Lalibala, east of and not far from the sources of the Takkazeh, is another sacred region. This town stands on a basalt upland terrace, forming a spur of Mount Asheten, whose wooded slopes rise to the south-west. Seven irregularities in the soil serve as a pretext for its priests to boast that, like Rome and Byzantium, their city is built on seven hills; like Jerusalem, it has its Mount of Olives, on which stand trees with huge trunks, brought from the Holy Land many centuries ago. The town and the churches are surrounded with trees which, together with the perpetual spring of this temperate region, combine to make this place a charming and salubrious residence. Still Lalibala is very sparsely populated; its old buildings are crumbling away amidst the rocks, while its underground galleries have no longer any outlets. The inhabitants consist almost exclusively of priests, monks, and their attendants. The churches of Lalibala are the most remarkable in Abyssinia, each being hewn out of a block of basalt, with altars, sculptures, and columns complete. Unfortunately the rock has been weathered in many places, and of the monolith peristyle of one of the finest churches nothing survives but four columns. The buildings of Lalibala evidently belong to various periods, but it seems certain that most of these monuments must be attributed to the king whose name is preserved by the city, the Abyssinian "St. Louis," who reigned at the beginning of the thirteenth century. The workmen who carved out these curious subterranean churches are traditionally stated to have been Christian refugees from Egypt.

KOBBO—GURA—SOKOTA.

East of Lalibala, the depressions of numerous passes, running over the Abyssinian border-chain into the Angot and Zebul countries, contain the waters of the picturesque lakes Ardibbo, Haïb, and Ashango. In this region of alternate forests and pasture-lands are several large villages wherein the sovereigns of Abyssinia have often resided. A convent, formerly one of the richest in Abyssinia, stands on the woody "Island of Thunder" in Lake Haïk. On the bank of this lake is the village of *Debra-Mariam*, chiefly occupied by the priests' wives, who are not allowed to visit their husbands in the monastery. The waters of the lake were inhabited by a solitary hippopotamus at the time of Lefebvre's visit, respected by the natives and dreaded by navigators. Lower down, on the eastern slope of the Red Sea, stand the large markets of *Kobbo*, *Gura*, and *Waldia*, frequented alike by Abyssinians and Gallas, and described by Lefebvre as veritable towns.

Sokota, capital of the province of Wag, stands at a height of 7,500 feet, north of the Lasta Mountains, on both banks of the River Bilbis, which flows to the Takkazeh through the Tsellari. Sokota is a commercial town, as till recently

attested by its Mohammedan settlers. The Agau, who form the basis of the local population, are not sufficiently energetic to trade or work the coalfields in the neighbourhood. The market of Sokota, which lasts three days every week, is mostly visited by the merchants and dealers in salt which serves as the chief small currency of southern Abyssinia, whereas in northern Tigré bales of cloth are employed. The *amoleh*, or salt money, shaped like French whetstones, is procured from the salt lake Alalbed. The mean weight of each block is a pound and a quarter, and it naturally increases in value as it penetrates farther into the interior. Whilst the Danakil quarries of the Taltal tribe supply over a hundred of these amoleh for a Maria-Theresa talari, they are occasionally sold on the western banks of Lake Tana at tenpence a-piece. When Sarzec and Raffray crossed this country in 1873, they were worth at Sokota about threepence half-penny; but eight years afterwards, at the time of Rohlf's visit, their value had diminished by three-fourths. When the means of communication shall have become more easy, they will entirely lose their conventional value in the barter trade, and will be exclusively used as a condiment. The Abyssinian proverb, "He eats salt," applied to prodigals and spendthrifts, will then have lost its point. The packers are very careful to protect the salt bricks from moisture; they lay them in parallel rows on copper plates, made like cartridge boxes, which are placed in layers on the back of a mule and covered with an awning.

Sokota has recently been greatly impoverished; devastated by epidemic fevers, it has lost three-fourths of its population, which from 4,000 to 5,000 in 1868 had fallen to not more than 1,500 at the time of Rohlf's visit in 1881. In the vicinity of Sokota a monolithic church, like those of Lasta, has been hewn in the granite; its crypt contains the mummies of several kings of the country. The roads are bordered with dolmens similar to those of Brittany. One of the neighbouring Agau tribes bears the name of Kam, or Ham, after whom D'Abbadie applies this term to the whole group of "Hamitic" languages, of which the *Ham*, or *Hamtenga*, is regarded as typical.

ADUA.

From Sokota to the country of the Bogos another caravan route, passing about 60 miles to the west of the Abyssinian border-range, traverses *Abbi-Addi*, capital of the province of Tembien, on the route to *Adua*, present capital of the Tigré, and next to Gondar and Basso, the largest market in all Abyssinia. This town stands nearly in the middle of the region of plateaux separating the two large curves described by the Takkazeh and the Upper Mareb. The River Assam, a tributary of the Takkazeh, winding through the naked but fertile plain of Adua, flows southwards, whilst to the north of the hill on whose side the town is built (6,500 feet), stands the isolated and precipitous Mount Shelota, or Sholoda, 9,000 feet high. Eastwards, overtopping the other summits, stands the lofty Semayata, 10,300 feet high. Adua, with its steep winding streets lined with small stone houses thatched with straw and encircled by slate terraces, scarcely presents the

appearance of a capital. Small churches surrounded by thickets stand here and there, and on the top of a hill a cathedral, a huge building with a conic roof like most of the civil residences, has been recently built by an Italian architect. In the gardens flourish numerous exotic plants imported from Egypt and Syria. Not far from Adua are the ruins of Fremona, the seminary of the Jesuits driven out of Abyssinia in the seventeenth century. These ruins are avoided by the peasantry, who believe them to be the abode of evil spirits. Near the town Prince Kassai gained the decisive battle which made him the present Emperor of Abyssinia.

AKSUM.

Adua is heir to a city which was the seat of an Abyssinian empire at one time stretching from the banks of the Nile to Cape Guardafui. *Aksum*, although

Fig. 54.—ADUA AND AKSUM.

Scale 1 : 270,000.



fallen from its former state, is still regarded as holy; it is the city where the coronation of the emperor takes place, and fugitives here find a sanctuary more respected than most of the convents. Its monasteries are inhabited by eight hundred priests, and by hundreds of youths who are being educated for the same profession. Aksum, the Aksemeh of the Abyssinians, lies some 12 miles from Adua on a romantic site 1,000 feet more elevated above the sea. Here its groups of houses and churches, each surrounded by groves and gardens which clothe the slope of the hill with verdure, are enframed on one side by dark basalt walls, forming a striking background to this charming picture. According to tradition, Aksum was founded by Abraham; a dignitary of the church, hardly inferior in rank to the echaghé or to the abuna, here claims to be the guardian of the "tables of



ADUA, CAPITAL OF TIORÉ.

the law," and of the holy ark of the Jews brought back from Jerusalem by Menelik, son of Solomon and the Queen of Sheba. But Aksum possesses some genuine antiquities, which the inhabitants watch over with jealous care. A column bears a Greek inscription, now almost illegible, which commemorates the victims of a certain King Aeizanas, "son of the invincible Arès." Is this Aeizanas identical with La San, the Christian king who lived in the middle of the fourth century of the vulgar era, or did he belong to the earlier pagan dynasty, as might be supposed from his claim to the title of the son of Mars? Howsoever this

Fig. 55.—AKSUM.

Scale 1 : 30,000.



be, this precious inscription, reproduced for the first time by the explorer Salt, is a proof of the ancient relations existing between Abyssinia and the Greek world. Another column, discovered by Ferret and Galinier, is engraved with Himyaritic characters, also nearly effaced by time. According to D'Abbadie's reading it perpetuates the memory of the valiant "Halen, king of Aksum and of Hamer," that is to say, of the country of the Himyarites. South-western Arabia and Ethiopia formerly constituted one empire. On the plateau of Aksum, near an enormous sycamore whose trunk is 50 feet in circumference, stands another curious monument, which has been appealed to in proof of an ancient Egyptian culture in Abyssinia.

It is a monolithic obelisk some 83 feet high, but of a style entirely different from that of the Egyptian obelisks. Its ornamentation consists of a nine-storied tower pierced with windows and surmounted with a small pyramid with fluted base, curved and spherical sides. About fifty other obelisks are scattered over the neighbouring space, some fallen down, others leaning against the trunks of the trees, with ancient altars still standing amidst these ruins. Not far off unfinished carvings are still to be seen in the trachytic quarry whence the workmen obtained the materials for these obelisks. Amongst its other buildings Aksum also possesses, in the enclosure of its gedem or sanctuary, a Portuguese church flanked by an embattled tower. An aqueduct is cut in the rock, and close to the town the side of a mountain is undermined by catacombs which are said to be the tombs of the kings, and the place where "the great serpent, the ancient King of Abyssinia, is concealed."

ANTALO—SENAFEH.

Antalo, the former capital of Tigré, is situated at a height of some 8,000 feet, on an amba surrounded by deep gorges, where rise the affluents of the Takkazeh. A higher plateau, crowned by the natural fortress of the Aradom amba, rises to the west, whilst to the south and east stretches the vast fertile plain on which the English established their head-quarters during the expedition of 1868. Antalo has since been abandoned, and its quarters, separated from each other by deep ravines, are nearly all in ruins; its inhabitants have migrated to *Chalikut*, about 6 miles to the north-east, one of the most charming towns in Abyssinia, its houses and churches surrounded by gardens and thick masses of trees.

Situated on the border-chain of eastern Abyssinia, at the very fringe of the terrace-lands sloping to the plain of the Danakils, Antalo and Chalikut are of some importance as depôts for the salt merchants passing from the country of the Taltals to Sokota. Between this latter town and Chalikut the chief marts are *Samreh*, situated near the former lacustrine plain of Samra; then the lowland towns of *Atsbi*, or *Absebidera*, and *Fisho*. The new town of *Makaleh* has been built by the present negus on the very crest of the Abyssinian chain, and like Debra-Tabor, Adua, and Magdala, occasionally serves as a temporary capital of the kingdom. Here an Italian engineer has erected a palace in the "European" style of architecture. From this commanding site King Johannes overlooks a large portion of the still unreduced Danakil territory. He has even made some conquests in these lowlands, and on one of the four terraces, which fall in a series of gigantic steppes down to the plain, he has founded the market of *Seket*, much frequented by dealers in salt.

North of Antalo and Chalikut, and parallel to the border chain of Abyssinia, several other commercial towns follow at long intervals on the main road which connects the uplands with the forts of Zulla and Massawah. Some of these miserable collections of huts have acquired a certain importance in the history of Abyssinian exploration as the camping-grounds and places of observation of European travellers. One of the most populous of these villages is *Haussen*, situated on a

plateau intersected by deep ravines. Farther on comes *Addigrat* (*Add' Igrat*) or *Attegra*, standing in a fertile valley about 8,000 feet above the level of the sea, and commanded west and south-west by heights rising to a still farther elevation of over 3,000 feet. To the west, on a sandstone amba whose terminal escarpment, some 100 feet high, can be scaled only by means of ropes, lies the monastery of *Debra-Damo*, one of the most celebrated in Abyssinia. Here all the surrounding populations come to deposit their wealth on the least indication of war. The summit of this rock, covered with a vegetable soil and provided with one hundred and fifty perennial wells, although carefully cultivated, yields but an insufficient crop, so that the monks have to trust to the generosity of the faithful on the plains. Formerly the younger members of the reigning house were banished to this amba.

Senafeh, a town situated still farther north, occupies a sheltered position at the foot of precipitous rocks. As the first mountain station on the route followed by the English army to rescue the prisoners in the hands of Theodore, the camp of *Senafeh*, during the campaign of 1868, was one of the greatest strategic importance. When the English carriage road, from *Adulis Bay* to *Senafeh* through the gorges of *Kumaili* is repaired, this village will probably become a flourishing city. To the west *Halañ*, or the "ascent," which was till recently entirely Catholic, and *Digsa* (*Digsan*) are the first upland towns on either branch of the river *Hadas*, and have also gained a place in the history of Abyssinian exploration.

The capital of *Tigré* is connected with the Red Sea coast by two routes. The shortest runs north-east towards *Senafeh*; the other takes a northern direction, crossing the *Mareb* at an elevation of about 4,000 feet, and thence ascending the

Fig. 56.—KUMAILI VALLEY.

Scale 1 : 650,000.



valley of this river along the heights of the western slope. North of the point where the river is crossed the escarpments of the plateau are broken into basalt headlands, columns, and peaks of fantastic shape. On these detached crags are the scattered villages belonging to Gundet, a district famous in African history. Here began the series of military disasters which, combined with financial loans and extortions, crushed the power of Egypt, making the country the sport of bankers and European diplomatists. At this period (1875) the Khedive of Cairo was one of the great potentates of the world so far as regarded the extent of his dominions. His captains had penetrated up the Nile as far as Lake Albert Nyanza and the watershed of the Congo. Egyptian garrisons had been stationed at the ports on the west coast of the Red Sea, and even farther south had gained a firm footing in the Harrar district and Somaliland. The invaders had already enclosed Abyssinia on the south, and thought the time had come to take possession of the plateau; but they were utterly routed at the battle of *Gudda-Guddi*, or *Gundet*. Nearly the whole of the invading army perished, together with its two leaders, Arakel Bey and the Dane Arendrup. The invasion, which was to have once for all reduced Abyssinia, restored its political unity from Hamassen to Shoa, and revived Christianity throughout the whole of this upland region, which seemed already a prey to Islam. In 1876 a second army, commanded by Hassan, son of the Khedive, again scaled the Hamassen plateau and occupied the strong strategic position of Gura, east of the Upper Mareb. But the lower part of their camp being surrounded by enemies, the Egyptian troops were almost entirely exterminated. They left their cannons and small-arms on the battlefield, and Prince Hassan only succeeded in obtaining his liberty by paying a heavy ransom. According to a report, which appears however to have been groundless, circulated immediately after the battle, Hassan and all the other prisoners were tattooed on the arm with the sign of the cross, a symbol of victory over the crescent.

DEBAROA—KASEN—ARKILO.

The most populous and commercial town on the route from Adua to Massawah, by way of the western slope of the Upper Mareb, is *Kodo Felassi* (*Godo Felassih*), capital of the province of Seraweh. As a trading station it has replaced the town of *Debaroa*, farther to the north, which, although now of little importance, was formerly the residence of the Bahr-Nagash, or "Sea Kings," as the governors of the maritime provinces were called. Unlike the round houses of Central Abyssinia, with their stone walls and thatched roofs, those of Debaroa are partly subterranean, resembling the dwellings in many districts of Caucasia and Kurdistan. The slope of the mountain is cut into steps, and the rectangular space thus obtained is transformed into a house by means of a clay roof, which at the back rests on the ground, and in front is supported by pillars; the smoke escapes by means of an aperture made in the roof, which is closed in rainy weather, excluding light and air, and converting the dwelling into a loathsome cavern. The houses of all the Hamassen villages are constructed in this fashion.

The camp of the ras, or chief, who governs the province of Tigré, is situated at *Atsaga* (9,460 feet), at the junction of the routes ascending from the coast at Massawah, and from the countries of the Bogos and Mensas. A short distance to the east stands the town of *Asmara*, present residence of a shum, or chief, who claims the title of "King of the Sea." Asmara lies on the extreme edge of the Abyssinian plateau, at the point where the route entering on the Red Sea watershed winds down to the plain.

Like Asmara, a few other hamlets serve as intermediary stations for the caravans on their arrival at the crest of the Tigré plateau. *Kasen*, standing on the last spur of the Hamassen uplands north-west of Asmara, also commands one of the routes leading to Massawah. This post is occasionally dimly visible at a distance of 45 miles in a straight line between the haze of the horizon and the marine vapours.

Fig. 57.—BOGOS TERRITORY.

Scale 1: 500,000.



From Kasen another caravan route runs north-west to the Senhit uplands, and to *Keren*, capital of the Bogos territory. This place, surrounded by olive-groves, already lies in the kwalla zone at a height of 4,800 feet above the sea. A fortress named *Senhit*, like the country itself, has been built by the Egyptians at the side of the town; but in virtue of the treaty concluded with the English it is to be evacuated and surrendered to the King of Abyssinia. Keren was the centre of the Catholic missions in northern Abyssinia, and its large seminary supplied numerous native priests for the churches scattered throughout the provinces of the empire. Nearly all the inhabitants of the Bogos and Mensa territories have abandoned their Mahommedan practices to re-embrace the Christian religion as taught in its new form by the Lazarist missionaries.

The route descending from Asmara to the Red Sea, encircles on the north a group of projecting uplands, on one of which stands the famous monastery of *Bijan*

or *Bizan*, founded in the fourteenth century, and often mentioned by Portuguese authors under the name of the convent of the "Vision." It takes this name from a gilded cloud said to have been seen hovering in mid air by the traveller Poncet and other pilgrims in the year 1700. Nearly a thousand monks live in the convent and the adjacent buildings.

At the foot of the mountains, but separated from the littoral plain by a chain of hills, stands the village of *Ailet*, in a lonely valley which would amply repay cultivation. In the neighbourhood, three miles farther south, are hot springs (138° F.) sufficiently copious to form a stream; the surrounding ground within a radius of 155 feet from the orifice is too hot to permit of its being traversed barefooted. When descending the plateau the Abyssinians are accustomed to plunge into the source of the river *Ailet*, and even occasionally to wash their sheep in it. A poisonous beetle lives in a part of the hot spring where the temperature cools down to 118° F. Northwards in the Samhar district are many ancient ruins, chiefly tombs, some of which resemble the megalithic monuments of France. An ancient town, now abandoned, at one time covered a space of several miles in circumference.

MASSAWAH.

On the plain a few stations follow along the route to the coast at Massawah. Such are *Saati*, or the "Fens," so-called from the pools of water which are usually found in the beds of the dried-up watercourses during the dry season; *M'Kulu*, which the Europeans of Massawah have chosen as their health-resort, and have surrounded with groves of tamarinds and other trees; *Hotumlu*, headquarters of the Swedish missionaries and their schools. To the south, nestled amidst mimosa-trees, is the town of *Arkilo*, a kind of capital, where resides the naïb, a descendant of a dynasty of chiefs who, since the end of the sixteenth century, have negotiated all commercial transactions between Abyssinia and Massawah. The inhabitants of this territory owe a double allegiance to the traders of the neighbouring seaport and to the Abyssinians of the plateau, whose claim to the ownership of the lowlands has been maintained from age to age, and annually renewed by raising winter crops in the district. The Turks, having conquered the uplands and the coast in 1557, attempted at first to govern the coast populations directly; but finding themselves powerless against nomads ever on the move, they surrendered their authority to the chief of the Belaus, a branch of the Hababs who roamed over the neighbouring plains. Even the garrison of Massawah, mainly composed of Bosniaks, was gradually absorbed with the Hababs by marriage. Made naïb, or "lieutenant," of the viceroys of Hejaz, the chief of the Belau received a regular subsidy from the Turkish Government conditionally on his protecting the Turkish or Abyssinian caravans against the attacks of the neighbouring tribes, remitting to the suzerain a portion of the taxes paid by the merchants, and supplying the island with the necessary water. Frequent quarrels arose between the naïb and the Massawah islanders; the aqueducts were often cut, and the naïb himself, driven from *Arkilo*, was often

obliged to take refuge in the interior. It also happened that the Abyssinian sovereigns, in whose interests it is essential that the port of *Massawah* should remain open to the outer world, have wasted the country to retaliate on the slave-dealers and corsairs. By virtue of recent treaties, the approach to Massawah, now an Italian port, although the Egyptian flag still flies on the walls, is to be made

Fig. 58.—MASSAWAH.

Scale 1 : 100,000.



completely free to the trade of Abyssinia. This port of the Red Sea is therefore, if not politically at least commercially, more than ever a natural dependency of Abyssinia, and its importance, already considerable, cannot fail to increase rapidly if peace is maintained on the plateaux. Detached forts command the approaches of the town and mark the limits of an intrenched camp in which the Egyptian governor formerly maintained a corps of 3,000 troops.

The town of Massawah, the Arabian Medsawa, or Mussawah, and the Abyssinian Mutogna, occupies a coral islet about 3,300 feet long from east to west, but scarcely more than 1,000 feet broad from north to south. Stone houses of Arab construction, and branch huts, are crowded together on this rock, which is connected by a dyke with the still smaller island of Taulud. Taulud itself is attached to the mainland by means of a pier about 5,000 feet long, over which is carried the pipe by which the cisterns of Massawah are supplied with water from M'Kulu. But both aqueduct and pier, like the barracks, fortifications, and other buildings built some twenty years ago under the direction of Munzinger Pacha, are in a very dilapidated condition. As in their own country, the Egyptians understand the art of constructing, but neglect the duty of repairing, their public buildings. The Abyssinian trade with the Greek, Banian, and other foreign merchants settled at Massawah is conducted by means of caravans. These caravans, laden chiefly with the valuable products of the Galla country—coffee, gold, and white wax—set out at the end of winter, so as to cross the Takkazeh before the floods. They take two or three months to accomplish the journey, and return at the end of the autumn, resuming their annual journey the following spring. In 1861 the value of the Abyssinian exchanges, including slaves, through the port of Massawah, was estimated at £40,000, and twenty years thereafter, in 1881, they had risen to £280,000. The chief exports are skins and butter for Arabia, and mother-o'-pearl; that of ivory has greatly fallen off. Mules of Abyssinian stock are also exported to the plantations of Mayotte and the Mascarenhas Islands. Early in the year 1885 Massawah and the surrounding district was occupied by the Italians, with the consent of the English and Egyptian Governments.

THE DAHLAK ISLANDS.

The large coralline islands of Dahlak east of the Gulf of Massawah, the chief of which are Dahlak and Nora, have lost nearly all the commercial importance they enjoyed before the Turkish rule. At that time they were inhabited by a Christian population of Abyssinian origin, whose chapels are still to be seen, and whose dialect, although in a corrupt form, is still current in the archipelago. At present the people, all Mohammedans, number 1,500, whose only resource is the milk and flesh of their goats, and the products of their fisheries. The Persian and Indian traders make yearly voyages to these islands to purchase the pearl oysters from the fisheries of the surrounding bays; the depôt stands on the eastern shore of the larger island, at the village of Dömölö. Like the pearl-divers of Bahrein, those of Dahlak never commence operations till after the rains, as they say that the pearly secretion is formed by the mixing of the fresh with the salt water. The natives also fish for the turtle, but neglect the sponges with which the bed of the sea is here thickly covered. The people of Dahlak and the surrounding archipelago possess large herds of camels, asses, and goats, which they allow to roam in a wild state over the island, or else confine to desert islands. On one of these islets are even found a few cows.



GENERAL VIEW OF MASSAWAH

ADULIS—ZULLA—HANFILA.

The long and narrow bay stretching from the north southwards some 30 miles inland, which the Disseh islanders call the "Gulf of Velvet" possibly on account of the calmness of its well-sheltered waters, is much nearer to the upland Abyssinian plateaux than Massawah, and the commercial exchanges have often taken this direction. This inlet of the seaboard, the Annesley Bay of the English, is more commonly known by the name of Adulis Bay, as it was called some two thousand years ago, when the fleets of the successors of Alexander rode at anchor in its waters. A Greek inscription, copied in the sixteenth century by the Egyptian monk Cosmas Indicopleustès, celebrates the great king Ptolemy, son of Ptolemy and "Arsinoë." A second, which relates the glorious expeditions of the Abyssinian king "Eb Aguda," is of the highest geographical importance, as it contains a series of twenty-three Abyssinian names, the first elements of the comparative geography of the country. Mariette has proved, by identifying many of the names engraved on the gates of Karnac with those of the Adulis inscription, that Egypt had certainly established relations with Abyssinia as far back as the time of Thotmes III., in the eighteenth century of the old era. A few capitals cut in the lava, and marbles sculptured by the Byzantine artists, are all that has been brought to light of the buildings of the ancient city, which now stands more than three miles inland, a fact probably due to an upheaval of the coast, or else to the gradual increase of the alluvial deposits. Its ancient name still exists under the form of *Zulla*. To the south on the heights are the remains of a town, which was probably the sanitorium of Adulis. During the second half of this century Adulis has often been regarded as a future French colony, because the strip of land round the bay, together with the island of Disseh, was conceded to France in 1840 by a sovereign of Tigré; but this written concession was followed by no act of occupation, and England is the power which, under cover of the Egyptian flag, possesses this corner of Abyssinian territory. In no other region has Great Britain given a more striking proof of her widespread power than on this arid coast of the Red Sea. In this bay, where are scarcely to be seen a few wretched boats or fishing rafts composed of three boards nailed together, some hundreds of vessels rode at anchor in 1867 and 1868. A landing stage, of which a few traces still remain, stretched over half a mile into the sea; a railway ran southwards as far as the base of the escarpments; and huge reservoirs, dug at the foot of the mountains, served as watering-places for the elephants and forty thousand beasts of burden. Zulla was the place where the British army landed and re-embarked, having brought to a happy conclusion an expedition without parallel in the history of England and modern times, not only for the justice of the cause and mathematical precision of the operations, but also for its complete success, almost without bloodshed, and the disinterested conduct of the victors. This march of an armed European force over the Abyssinian plateaux ended without conquest, and the traces of the passage of the English were soon effaced on the sands of Zulla. Nevertheless with this passing visit of the stranger begins a new era in Abyssinian history.

The coast of the Red Sea, which is deflected in the direction of the south-east, is here and there indented by bays and creeks where sea-ports might be established, were the caravans unfortunately not compelled to traverse the burning and dan-

Fig. 59.—ANNESLEY BAY.

Scale 1: 600,000.



gerous Danakil territory before reaching the valleys of the Abyssinian watershed. The bay of Hawakil, explored by the English at the time of the Abyssinian expedition, is obstructed by volcanic cones surrounded by rocks and lavas very

difficult to traverse. *Hanfil*, which is supposed to be the ancient port of *Anti-phyllus*, is useless except for working the saline lake Alalbed and the neighbouring pearl fisheries. The little harbour of *Edd*, some 120 miles from the Abyssinian chain, is also surrounded, like Hawakil Bay, by volcanoes and rugged rocks which render the country almost inaccessible. A trading company of Nantes had acquired possession of this port, but, being unable to derive any advantage from it, offered it to the French Government, which declined the costly present. The company ultimately ceded all its rights to the Khedive.

ADMINISTRATIVE DIVISIONS.

The political and administrative divisions of Abyssinia undergo endless changes according to the power of the vassals and the caprice of the sovereign. Certain chiefs rule over several provinces and even possess the title of king, like the *râs* of Gojam, who was crowned in 1881, whilst others are fain to rest satisfied with a simple canton. In 1882 the largest fiefs numbered twenty-four, of which four were governed by *râs* (chiefs) of the first rank, five by those of the second rank, and fifteen administered by chiefs bearing the title of *shum*. But in spite of the political vicissitudes, most of the Abyssinian districts have retained their names and their general contours, as indicated by the very relief and nature of the geological formations themselves. Without including the vassal realm of Shoa, the tributary states beyond the Abaï, the Galla districts and the northern territories recently annexed, the Abyssinian empire at present comprises the four governments of Amhara, Gojam, Lasta, and Tigré, which, with their several provinces, fluvial basins, and chief towns, will be found tabulated in the Appendix.





CHAPTER VII.

SHOA, COUNTRY OF THE DANAKILS, NORTHERN GALLA STATES.



SHOA or Shawa, and the hilly country of the northern Gallas, form a part of the Abyssinian plateaux. From a political point of view Shoa, after having been independent for some length of time, has again become attached and pays a regular tribute to the Abyssinian empire, the king of Shoa humbling himself before the "king of kings." South of the Abaï most of the civilised or barbarous tribes have been subjugated to Northern Abyssinia by victorious expeditions, and ambassadors bring to Debra-Tabor or Makaleh a yearly tribute of ivory or other valuable commodities. On this side the whole of southern Abyssinia even beyond Kaffa is thus bounded by fluctuating frontiers; the area of Shoa has been increased threefold, and the kingdom of Gojam has been enlarged in the same proportion, although the Abaï interrupts all communications between Abyssinia and the country of the Ilm-Ormas for seven or eight months in the year.

The peoples of these countries, mostly differing in origin, speech, religion, and customs, should be studied apart. The lowland tribes, however, comprised between the main Abyssinian range, the Red Sea coast, the Gulf of Aden, and the watershed south of the basin of the Awash, form a group clearly defined by the way of life the soil and the climate compel them to follow; but as intermediaries of the trade between the plateaux and the sea, they are indispensable to the inhabitants of Shoa. Thus, however different the two countries may be, they form a part of the same social organization.

THE SHOA HIGHLANDS.

South of the Angot and the Zebul the main Abyssinian range penetrates into Shoa, here diverging slightly from the line of the meridian towards the south-west, parallel with the course of the Awash. This part of the border-chain is called Shakka, or Amba-Shakka, and, according to Beke, attains a mean height of from 8,000 to 9,000 feet, several of the crests even considerably exceeding this elevation. The highest mountain, at least in the vicinity of Ankober, is Mount Metatiteh (11,000 feet), which overlooks the greater part of the kingdom of Shoa lying at

its feet, and the lower terrace-lands sloping towards the Awash Valley and the affluents of the Abaï. In no other region of Abyssinia is the land more cut up into distinct sections by the running waters. From some of the heights on the plateau the country seems at a distance like a vast and almost level plain, where the valleys are scarcely suggested by the interrupted vegetation, but on a nearer approach these valleys develop into vast chasms of enormous depth. One of these gorges, some 36 miles north-west of Ankober, is over 5,100 feet in depth, with a breadth scarcely exceeding 2,000 feet. Amongst the abysses occurring in this rocky region are Tegulet-Wat, near the ancient capital of Shoa, a fissure some 600 feet long with a breadth of less than 3 feet. Stones dropped into this rent are never heard to strike the bottom. The rivers rising on the eastern slope of the Amba-Shakka, some of which have to descend from an altitude of about 6,600 feet on their way to the Blue Nile, rush through these chasms in a series of foaming cascades or magnificent rapids.

VOLCANIC FORMATIONS.

East of the main range, the base of Amba-Shakka is flanked by a collection of rounded hills, while parallel chains, such as the Argobba, rise in its immediate vicinity. Farther on an undulating plain stretches away towards the Gulf of Aden, here and there studded with volcanic cones which have ejected vast quantities of lava. One of these extinct craters, near the right bank of the Awash north-west of Ankober, forms a vast chasm many miles in circumference. Another much smaller crater still emits vapours from the summit of an isolated crag; this is the Dofaneh volcano, which lies on the left bank of the Awash some 36 miles north-east of Ankober. Its state of activity may be compared to that of Volcano in the Lipari Islands. On its sides are deposited layers of sulphur, presenting every shade from bright yellow to reddish brown. The group of Mintshar volcanoes, in the southern district of Fatigar, contains other craters in which the sulphur becomes sublimated. One of these igneous mouths, that of Winzegur, forms an enormous caldron, according to Harris nearly 6 miles in circumference, with walls rising to a height of from 800 to 1,000 feet; two breaches in the enclosure have given vent to streams of molten lava and black scoriæ which wind amid the surrounding vegetation. The pool of Burtshatta in the vicinity fills a circular bed of black and yellow lava surrounded by vertical cliffs; the rock is honeycombed with hundreds of caves, whose entrances are half concealed by the climbing plants growing to its sides. Through one of the extinct craters the elephants and rhinoceroses have opened a passage to the brink of this lake. In the western district of Dembi, Antinori describes another volcanic group interspersed with numerous lakelets, but their water being destitute of fish they are evidently of recent origin. Farther on to the south-west the isolated Zikwala peak, about 10,000 feet high, already mentioned on Fra Mauro's famous map, encloses a lake in its terminal crater, on the margin of which stands a monastery founded by a "vanquisher of demons." Many hot springs rise in these volcanic

lands of Shoa, three of which in the country of the Finfini Gallas, close to the lofty and isolated Mount Entotto (9,956 feet), spout forth like geysers with a temperature of 170° F. To the action of these warm mineral waters are probably due the fossilised siliceous trees occurring in so many places on the plateau between Lasta and Shoa. Like the "petrified forests" of Cairo, those of Abyssinia consist of trees belonging to the order of the *sterculiaceæ*.

THE GALLA HIGHLANDS.

A ridge of uplands, curving to the south-west, and separating the Abaï from the sources of the Awash, forms the natural boundary between Abyssinia proper and Gallaland. This region is but slightly diversified, presenting no prominences except those of the cliffs fringing both sides of the torrents; but to the south the mountains resume the appearance of a regular chain. They must be regarded, however, rather as a general swelling of the surface broken into distinct segments and isolated masses by the rivers flowing northwards towards the Blue Nile, and southwards to the large river known as the Gugsä, Uma, Abula, and by a thousand other names. By the action of the erosions which have broken up the plateau into its present shape, the axis of these heights has been directed from the north-west to the south-east. In this direction follow in succession Goro Chen, Belhella, Tulu Amara, Chillimo, Diriko, Kalo, and Roggeh, all mountains exceeding 10,000 feet in height. The highest point at the eastern extremity of this range is said to be Hamdo, with a reputed elevation of not less than 11,500 feet. In the same direction, but in the Gurageh district, occurs the isolated Mount Wariro, to which Chiarini has assigned an altitude of 13,000 feet.

The mountainous masses bounded north by the course of the Upper Gugu are considerably lower, having a mean elevation of scarcely more than 7,000 or 8,000 feet. Nevertheless a range in the Inarya district, running from the north-east to the south-west, rises here and there to 10,000 feet, culminating in Mount Egan, 10,300 feet high. In the Kaffa country, another chain, bounded north by the river Gojeb, rivals the Gurageh Mountains in height; and Mount Hotta, towards the eastern extremity of this chain, is said to have an altitude of about 12,200 feet. But the giant of the Ilm-Orma territory is said to be Mount Wosho, situated west of the river Uma, in the hitherto unexplored Waratta country. According to Antoine d'Abbadie, who saw it at a distance of twenty miles, towering above the valley of the Uma, this mountain exceeds 16,600 feet.

THE AFAR COUNTRY.

The country of Afars, east of the Abyssinian border-chain, usually designated as a plain in opposition to the plateaux, has however a very hilly and even mountainous surface in some places. In the volcanic chain which bounds the depression of Lake Alalbed stand the Mount Ortoaleh of Munzinger, and another "Smoky Mountain" seen by Bianchi during his vain attempt to reach Assab by descending

from Makaleh. South-west of the Bay of Assab, the irregular volcanic Mussali Mountain is stated to attain a height of more than 6,600 feet; lastly a border range, skirting the north side of Tajurah Bay, is dominated by cones from which lavas have been erupted. Mount Juda, one of these extinct volcanoes, attains a height of some 3,000 feet above sea-level; it throws off a southern spur, whose reefs have almost separated into two parts the bed of the gulf, which thus forms an inner lake rather than a part of the Indian Ocean. To the west other lava streams have entirely covered what was formerly the marine bed, and have thus cut off a portion of the bay, which has become Lake Assal, or as the Arabs ironically call it, in spite of the saltiness of its waters, "The Lake of Honey." It is also probable that the upheaval of the land has contributed somewhat to the isolation of this sheet of water, for the seaboard in the vicinity of Tajurah is largely composed of calcareous clays containing, to a height of from 130 to 160 feet, fossil shells similar to those now living in the African seas.

Lake Assal, at present separated from Tajurah Bay by a ledge some 12 miles long, has undergone various changes analogous to those of Lake Alalbed. It has also become a saline reservoir, and the crust of salt surrounding the shallows is so thick that laden camels can traverse it for nearly a mile from the bank. Like that of Lake Alalbed, the salt of this lake is a source of wealth to the neighbouring tribes. All the Afar and Somali peoples of the country here procure the supplies for their own consumption and for south Abyssinia, which gives them in exchange coffee, ivory, musk, and slaves. Like Alalbed, this lake is gradually subsiding, the waters brought down by the wadies being insufficient to replace the loss by evaporation. A whitish mark some 50 feet above the present surface of the lake indicates a former water level. At the time of Rochet's first journey to Shoa in 1834 it stood 600 feet below that of Tajurah Bay; since then its level has been variously calculated at from 576 to 770 feet, with a probable depth of about 130 feet. According to Bianchi numerous other depressions are found in the country of the Afars, some 660 feet below the level of the sea.

THE AWASH BASIN.

South-west of Lake Assal, in a region similarly studded with volcanoes and lava beds, are other lakes, but of fluvial origin, belonging to the basin of the Awash or Awasi. Unlike the other rivers of the country, the Awash does not disappear in deep narrow gorges. Whilst those watercourses sweep away the fertile soil along their banks, the Awash, which flows towards the Indian Ocean, waters its valley like the Egyptian Nile, without, however, reaching the coast. Like the Raguleh and other streams of the Afar country, it runs dry, notwithstanding the large volume of its middle course. The Awash rises south-west of the Shoa Alps, in the Finfini district, which is separated from the Nilotic basin by a mountain range. Its sources form several pools communicating with each other by several channels winding through a grassy district. Already broad and deep, the river sweeps round the mountains of Shoa, and after receiving a part of their drainage, it trends north-

wards along the foot of the main Abyssinian mountain range. At this part of its course the stream is most copious even during the dry season, being everywhere over 160 feet broad, with a depth of more than 3 feet, and a very rapid course. During the floods the Awash overflows for many miles right and left of its bed, its level rising from 40 to 46, and even to 60 feet, above the usual watermark. It might possibly be available even for steam navigation in this part of its course.

At the point where it is deflected from the mountains, the river flows north-eastwards towards Tajurah Bay, and its volume is increased by its affluent, the *Germana*, or Kasam, but afterwards gradually diminished, and at about 60 miles from the sea, after having traversed a distance of 480 miles, it loses itself in the marshy lake *Bada*, or Aussa, also called Abhelbad by many writers. This lacustrine basin, which probably lies below sea-level, rises and falls with the alternating rainy and dry seasons. Its waters are sweet, and deposit a fertilising mud, which repays a hundredfold the agricultural labour expended upon it by the Danakils of Aussa. The water necessary for the irrigation of the fields in summer is retained by a dam constructed at its northern end; but when the lands are thoroughly watered the overflow is discharged into a basin called "Lake Natron" from the crystallised chemical substances on its banks. Other lakes belonging to the Awash system, amongst others that of Leado, commanded by the Dofaneb volcano and Jebel-Kabret or "Sulphur Mountain," not far from the Abyssinian Alps, receive the overflow of this river during the flood season. Lake Zwai, Jilalu, Laki or Dambal, in the Gurageh country, probably belongs also to the same hydrographic system, and its surplus waters are said to flow into the Awash. Nevertheless, the natives informed Antonelli and Cecchi, that this basin had no affluent; hence its Ethiopian name of Zwai, or the "Motionless."

CLIMATE, FLORA, AND FAUNA.

The climate of this southern portion resembles that of the rest of Abyssinia, the only difference being that the air is more moist. The Shoa and Galla uplands, being nearer to the equator, are much more affected by the rainy zone, which lying between the two trade winds, fluctuates alternately north and south of the equator. Whilst the mean rainfall on the Abyssinian plateaux may be calculated at 30 inches annually, it is said to be about 40 inches south of the Abaï and Awash. Hence the vegetation is far more dense and exuberant in the southern than in the northern regions of Abyssinia. Whilst forests are rarely met in Abyssinia outside of the kwalla districts, travellers in the mountains of Shoa and its tributary territories speak of the immense forests of conifers, wild olives, and other trees, under the matted moss-grown branches of which they have travelled for hours. The vegetable species of these countries have hitherto been studied but by few botanists; but the climate is known to be favourable to the Abyssinian flora, and many other plants flourishing here are utilised for the sake of their leaves, gums, or seeds. This home of the coffee-plant could still supply the world with many other precious shrubs; it already yields to commerce the so-called oggieh, or korarima, a fruit highly prized for its delicate flavour and aroma.

Like the flora, the fauna of this Abyssinian district also presents a great diversity, although on the whole the types are similar. Shoa appears to be the home of the *colubus guereza*, an ape with a splendid black and white fur, which gives it a monkish appearance. The superstitious natives regard these animals almost as hermits, in consequence of their shy habits and the colour of their coats. In the Awash basin are also found oxen, distinguished beyond all others for the size of their horns, which attain a length of some six feet, with a thickness of six inches at the base. The upland prairies are overrun by a zebra, *equus Grevyi*, with

Fig. 60.—ROUTES OF THE CHIEF EXPLORERS IN THE LOWER AWASH REGION.

Scale 1 : 4,500,000.



extremely curious purple-black stripes. The Galla horse, which dies if taken far from its native mountains, has the thin legs, delicate head, full and shapely crupper, and the fire and obstinacy found amongst the pure Russian breeds. The animal most appreciated in Southern Abyssinia, from an economical point of view, is the civet cat (*civetta civerra*), whose musky secretion is monopolised by many of the sovereigns of the country. The males, who alone furnish this essence, are kept in packs of from one to three hundred, each animal being enclosed in a long cage made so narrow as to prevent him turning round; the

enclosures are kept at a uniform heat, so as to hasten the secretion, which amounts to from about eighty to one hundred grammes every fourth day. The animals are fed on an exclusively flesh diet, consisting of choice morsels prepared in butter. To prevent the evil eye, strangers are forbidden to enter these preserves.

INHABITANTS OF SHOA.

Like those of Gondar, the civilised Christian peoples of Shoa are mainly Amharinians, but they are separated from the body of the nation by lofty mountains. Whilst most of the Abyssinians live on the lands sloping towards the Blue Nile, those of Shoa occupy more especially the watershed of the Awash, a tributary of the Red Sea. Moreover, a large part of the plateau bounding Shoa towards the north is inhabited by peoples of Galla origin. Hence, from an ethnological point of view, Shoa consists of a sort of isolated promontory. The Abyssinians, properly so called, are here surrounded by the Ilm-Ormas, by far the most numerous, but divided into several tribes, the alliances between which are broken or formed according either to momentous interests or the caprices of the chiefs. The customs of the Shoa peoples are the same as those of the Amharinians, with this difference, that the entire population is more abjectly subject to the king's will. There are few slaves properly so called, and the Christians are forbidden to sell the Negroes, although they themselves are little better than slaves whose property and lives are at the disposition of their masters. A few Felasha or Fenja communities are scattered throughout Shoa, and amongst these Abyssinian Jews is usually classed the sect of the Tabiban, which possesses a monastery in the immediate vicinity of Ankober, in the midst of the Emamret forests. They are greatly respected and feared by the surrounding peoples as wizards.

As in Abyssinia properly so-called, the Shoa Mahomedans have been forcibly converted. They were formerly very numerous, and the name of Jiberti, by which they are known throughout Abyssinia, is a reminiscence of their holy city of Jabarta in Ifat, which has since disappeared. Foreigners, more especially French and Italians, are relatively numerous in Shoa, and since the visits of Rochet, Lefebvre, Harris, Combes and Tamisier, Isenberg and Krapf, hundreds of missionaries, artisans, and merchants have presented themselves in the nomad court of the successors of Sehla Sellasieh; but hitherto the natives have benefited little by the European inventions. Powder and arms manufactories and mills have not succeeded, and the concessions made to strangers for the building of railways is merely a proof that the king of Shoa is desirous of entering into direct relations with his powerful foreign allies.

Scientific voyages of discovery in the Galla country, interrupted since that of the missionary Fernandez in the seventeenth century till the time of Antoine d'Abbadie, are also becoming more frequent, thanks to the extension of the Abyssinian power into these countries; but it is still a dangerous undertaking, and of the two Italians, Chiarini and Cecchi, who recently penetrated as far as Bongo, one succumbed to fatigue, whilst the other was with difficulty saved by the intervention of the chief of

Gojam. The object of d'Abbadie's visit to these countries, which was to completely survey the course of the southern Abyssinian river, has not yet been accomplished. It is not known whether, after describing the large curve east of Kaffa, the water-course which forms a continuation of the Gugsä and receives the Gojeb trends westwards to the Nile or is deflected towards the Indian Ocean, but it probably falls eastwards as the upper course of the Juba. In any case it is not the Nile, as d'Abbadie supposed.

THE AFARS.

In the triangular space comprised between the Abyssinian range, the Red Sea, and the course of the Awash, the bulk of the people, whether nomad or settled, constitute the Afar, or Afer, that is to say the "wanderers," more commonly called Danakils by the Abyssinians. In the vicinity of the Awash they are known as Adel, or Adail, after the Ad-Ali, one of their most powerful tribes; but the various clans differ little in customs, dialects, and usages. The Danakils themselves claim to be Arabs, like so many other peoples of eastern Africa, and this pretension may be explained both by local crossings as well as by their nominal conversion to Islam. But there can be no doubt that the main body of the nation is connected with the Gallas of the west, the Shohos of the north, and the Somalis of the south. Their language is also of Hamitic origin, and their physical appearance is of an analogous type. They are still mainly addicted to fetish practices, in the sterile region of Lake Alalbed worshipping a solitary tree, the *cæsalpinia*, with splendid pink flowers, and elsewhere presenting their offerings to the sycamore. The men are usually handsome, extremely active and graceful dancers; while the women, who go unveiled, are distinguished during their brief youth by exquisite forms. But their beauty is soon blighted by their laborious life in this country of lava and sand, under the hottest climate in the world. More scantily clothed than the Abyssinians or Gallas, the Danakils merely wear a waistcloth of a many-coloured material, with a toga or shamma, often replaced by a skin thrown negligently over the shoulders. The men stick a porcupine-quill in their deftly arranged coiffure, and, like the Gallas, are extremely proud when they can ornament it with an ostrich feather, emblem of an enemy slain in battle. In the northern region, the huts of the Afars are very tastefully ornamented, the floor being covered with yellow mats, embroidered with red and violet designs.

The Afars are an independent nation, divided into two main groups, the Asuhian (Asaïmara) and the Adohian (Adoïmara), and into upwards of one hundred and fifty Kabilet (Kabail) or sub-tribes, banded together or divided according to their several interests. They recognise hereditary chiefs, called sultans or *ras*, according to the importance of the tribe. These chiefs, however, are by no means absolute masters, but merely the executors of the will of the people, expressed by a majority of votes in the general assemblies. All combine against the common enemy, and fight desperately in defence of their liberty. The most powerful sept are the Modaitos, occupying the whole of the region of the lower Awash, Lake Aussa, and the inland pasturages between Edd and Raheïta. No European traverses their

territory without claiming the right of hospitality or the brotherhood of blood; the two newly made brothers kill an ox and pour the blood over their foreheads, cutting its skin in strips, which they make into necklaces and bracelets. About 1840 the Zeila Arabs, reinforced by immigrants from Yemen, and Persian or Baluch mercenaries, penetrated into the Danakil country nearly as far as Aussa, but not one of the invaders returned. In 1875 an enemy more formidable than the coast Arabs attempted to force his way into their territory. At the head of 350 Egyptians armed with improved rifles and a train of artillery, Munzinger Pasha endeavoured to open a route towards Shoa, his intention probably being to reduce this kingdom under the sovereignty of Egypt. But the same Modaito tribe who exterminated the first expedition fell upon the second with a like result. Munzinger, with the bulk of his troops, was slain by the lances of the Danakils, who say that "Guns are only useful to frighten cowards."

As the mountain streams are lost amongst the sands and lavas before reaching the sea, the Danakils are unable to cultivate their lands, except along the banks of the Awash, where are a few garden-plots; insufficient, however, for the local wants. But through commerce the Danakils are enabled to procure sufficient supplies from the seaports and the markets of Shoa. It is the custom for every caravan en route to pay a tax on encamping, in return being entitled to the protection of the tribe, and thanks to its guides and safe conducts they pass in safety between the mountains and the sea. The Abyssinian sovereigns have often desired to close certain trade routes across the desert in order to open up others for their own advantage; but their power is arrested at the boundary of the plains, where the Danakils indicate the route to be followed with the points of their lances. In the northern part of the desert the Taltal tribe, who, according to Rüppell, greatly resemble the Abyssinians in features, are chiefly employed in working the salt in the bed of Lake Alalbed, which they sell to the Abyssinians of the plateaux in square bricks. The Taoras and Saortas, dwelling south of Adulis Bay in the Buri peninsula, are also Afars, modified by crossings with the Abyssinians, and speaking a Tigré dialect mixed with a large proportion of Arab words. According to Rohlfs the Taora and Saorta women are of extremely small stature in comparison with the men.

The redanto or chiefs of the northern Danakils are magicians, who hold communication with the spirit-world, and are acquainted with the star presiding over the destinies of each individual. The rank of redanto is hereditary, providing that the son be without physical or moral blemish, for unless of sound body and mind he would be incapable of holding communion with the spirits. On the Red Sea coast a few Afar families live by fishing, and venture far seawards in boats tapering to a point at the prow and stern, and carrying large square sails composed of mats. These boats were formerly greatly feared by navigators of the Red Sea. As bold on the sea as on the land, the Danakils often attacked and captured large merchant vessels; but they have been compelled to abandon their piratical courses, since the steam gunboats are able to chase them into the small creeks and maze of coral islands along the coast. The descendants of these corsairs now turn their attention to fishing, and are the only sailors in the Red Sea who still pursue the dugong or lamentein.



SOMALI MAN AND WOMAN.

THE SOMALI.

The Somali race, akin to the Afars in features, speech, and origin, is represented in the Awash basin, between Tajurah Bay and the realm of *Harrar*, by the powerful tribe of the Issas, who even make incursions across the Awash into the plains of the Danakils. These temporary migrations are caused by the irregularity of the climate, the rains falling at different times on the coast of the Red Sea and the Gulf of Aden. Immediately after the rains, when the pasture-lands are covered with rich grass, the Issas demand hospitality from the Danakils, who in turn come

Fig. 61.—SOMALI GIRL.



over to the Somali country when their own pasturages are dried up and the southern lands are renewed by the rains. This reciprocal dependence maintains harmony between these two powerful and warlike nations. The Issa, although nominally tributaries of the Egyptian Government, were practically independent, as the chief of the tribe had to be subsidised to protect the caravans going between the mountains of *Harrar* and *Zeila*. The Issa camel-drivers are almost exclusively engaged in transporting merchandise to the mountains, where their loads are committed to other drivers. They are always accompanied by their wives, who lead the camels and bear on their backs the firewood and cooking utensils, and, if

mothers, their children. The hereditary enemies of the Issas are the Gadibursis, also a Somali people, bold mounted marauders, who occasionally seize their flocks even in the neighbourhood of Zeila.

THE GALLAS.

In numbers and extent of territory occupied by them, the Gallas are one of the largest nations in Africa. Some of their communities are even settled on the frontiers of Tigré, along the eastern slope of the Abyssinian main range. Even as far as the equator, over a space of 600 miles from north to south, are scattered or grouped together tribes of the same race, whilst Gallas are met with from east to west throughout the region which stretches from the Upper Nile to the Somali coast. But it is not yet known where the national type is the best represented, or which is the most powerful tribe, the country of the southern Gallas being one which has been the least explored by European travellers.

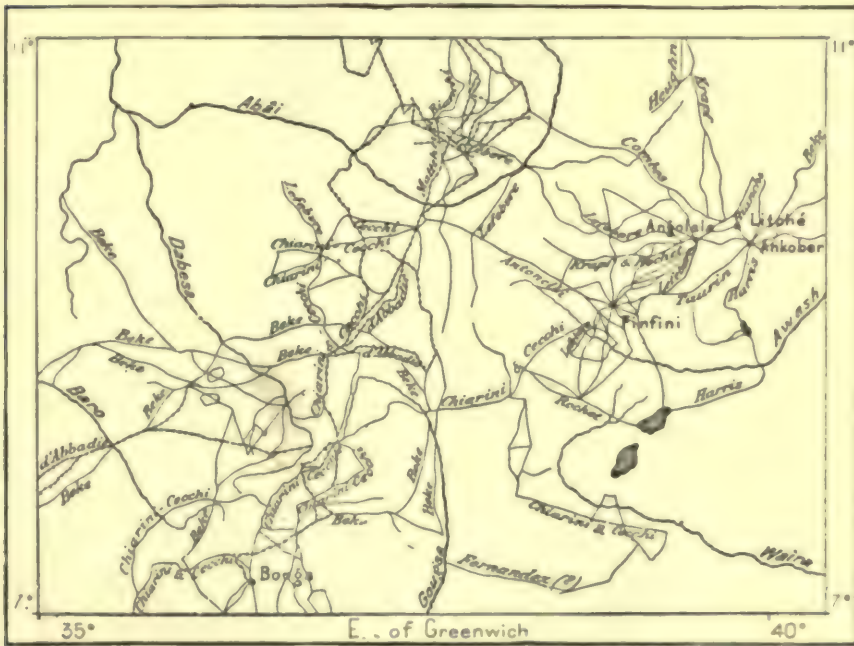
In this part of Africa an area larger than that of France is still unexplored, and everything strengthens the belief that this region, stretching south of Kaffa, will be the last to be visited by travellers. The only Gallas we are well acquainted with are those of the northern region, who, since the middle of the sixth century, have dwelt in and about the Abyssinian states. It is therefore natural that these races should be studied after those of Abyssinia. According to Beke the Gallas were so named by the neighbouring peoples after a river of Gurageh near which they fought a great battle; but this appellation is usually interpreted in the sense of "Land-hunters," a term denoting their nomad life and conquests. They call themselves Orómo, "Men," or Ilm-Orma, "Sons of Men," possibly "Brave Men;" although according to D'Abbadie this name, like the Spanish *hidalgo*, is synonymous with "Nobles." The traditions of the tribes vary; still the bulk of the Gallas, when asked whence their ancestors came, point to the south. Their original home is said to be towards the southern uplands, and the tribes near Mount Kenia are said still to go on a pilgrimage to this mountain, bringing offerings to it as if to their mother. It appears certain that towards the middle of the fifteenth century a great exodus took place among the peoples throughout all eastern Africa, and that this movement continued during the following centuries; it has even continued till recently in a north-westerly direction. The Abyssinian Gallas, the Wa-Humas of the riverain states of Nyanza, were to the north and west the advance guard of this migration of the Orómo peoples, which according to Barth and Hartmann, was probably caused by some great eruption of Kenia and other volcanoes of equatorial Africa.

In any case the "Sons of Men," whom some authors have termed Semites and even "Aryans," are Nigritians, connected by imperceptible transitions with the populations of Central Africa. In many points they resemble their northern neighbours, the Agau, and their eastern and irreconcilable enemies the Somalis. Both speak dialects of the same linguistic family, which has been provisionally classed in the "Hamitic" group. According to Krapf, all the Gallas, those living

in the vicinity of the equator as well as the Orómos of Abyssinia, speak languages so closely related that they can easily understand each other. The various dialects may be reduced to five, all bearing remote resemblance to the Semitic tongues, not in their vocabulary but in their phraseology, indicating a similar mental constitution. D'Abbadie has called attention to a certain coincidence between a large number of roots and grammatical features in the Basque and Galla tongues. The Gallas are said by Bleek to possess clicks like those of the Hottentots, but the statement has not been confirmed by other observers. Ignorant of writing, the Orómos have no books except the Bible, introduced by the missionaries, and which, with a few dictionaries and a grammar by Tuschek, constitute the entire Galla

Fig. 62.—ROUTES OF THE CHIEF EXPLORERS IN SOUTH ABYSSINIA.

Scale 1 : 6,000,000.



Routes of Antoine d'Abbadie.

120 Miles.

literature. The Ilm-Orma country is also occupied by peoples of different stock speaking another dialect as yet not reduced to writing by the missionaries. They are evidently the remains of conquered peoples forming isolated ethnological groups amid the invading hordes of the Galla nation. In the open Orómo country still exist a few groups of Amharinians who have preserved the Abyssinian language.

The Gallas are usually of middle height, or about 5 feet 4 inches, although men are found amongst them as tall as the Scandinavians. They are broad-shouldered and slender-waisted, the young men having chests which would delight a sculptor; the legs are shapely, the feet small and always well arched. Strong, active, and

slim, they resemble the Abyssinians, and more especially the Agau, to whom they are probably related; but they are usually of a more attractive and open cast of countenance. The Gallas are extremely dolichocephalous, forehead high and rounded, the nose flat, the lips full but rarely pouting, the beard thin and the hair wavy and growing in separate tufts. The finest men are said to be found amongst the Limmus and Gudrus on the banks of the Abaï, who, according to some authors, may be taken as types of the race. Like the bulk of the natives of the Upper

Fig. 63.—GALLA GIRL.



Nile, the "Sons of Men" are very skilful in dressing their hair in the shape of a crescent, a halo, or in long tresses; but the right to these decorations is limited in many tribes to those who have killed a man, under penalty of having it shaved off every three months. The skin varies greatly in shade; whilst that of the men is of a deep or reddish brown, that of the women is usually very light. The latter are all considered, even by white people, to be very handsome in their youth. According to Beke, the complexion of the Gallas along the Abaï or Blue Nile Valley is not darker than that of the Andalusian peasantry. It was due to their relatively fair

colour that the Jesuits derived their usual name from the Greek word *gala*, that is to say, "milk." The men and women are gracefully attired in the Abyssinian toga, and the hero who has distinguished himself by some famous exploit proudly plants an ostrich plume in his hair. The Gallas are armed with a lance, the two-edged knife, and a shield of buffalo or rhinoceros hide. Their dwellings, which resemble those of the Abyssinians, are circles of rough stones conically roofed with grass or reeds. They are nearly all built under the shade of large trees, and the traveller traverses many villages which he scarcely perceives through the dense forest vegetation.

The northern Ilm-Ormas, like their Abyssinian neighbours, are far more intelligent than those of the west, and acquire languages with remarkable facility. Like the civilised Abyssinians, they till the land and breed stock. They possess numerous varieties of cereals, good horses, the best mules to be found in Central Africa, and two varieties of oxen, the zebu and the sanku, with long horns which when sprouting are trained to grow in the shape of a lyre. In many districts all the villages are occupied with bee-farming. However, the Gallas have not all the peaceful virtues of the agriculturalist, and their warlike instinct is often aroused. The country is wasted by continual feuds, and in some tribes the able men have been reduced by more than two-thirds. Even in the family itself, endless vendettas are carried on, unless blood-money has been accepted. But if the Gallas are with good reason feared by most of their neighbours, they are in their turn frequently threatened in the north by the Abyssinians of Gojam and Shoa, and to the east by the Somalis, whilst the slave-hunters often make successful razzias into their forests. The children, especially, have reason to dread these marauders, because the adult Galla will often starve himself rather than submit to slavery, whereas if taken young they can soon be trained for a life of bondage. In nearly all the petty Galla states the trade in these children is carried on to the profit of the chiefs themselves, some of whom impose a direct "child-tax" on each family, whilst others accept human flesh in payment of imposts.

Some Galla tribes are grouped into republican federations, but the bulk of them, engaged in interminable wars, have elected *heyu* or chiefs, who alone of all the Gallas practise polygamy. Amongst the southern Ilm-Ormas, these chiefs are always chosen from some noble family, and are invested with power merely for a term of years.

Most of the Ilm-Ormas were converted to Abyssinian Christianity before the invasion of Mohammed Grāñheh, or the "Left-handed," who overthrew the power of the ancient Ethiopian kings. From this period they have preserved the names of a few saints, the celebration of Sunday or "the Great Sabbath," and some other feasts of Christian origin. At present the increasing influence of the Abyssinian sovereigns has compelled several Galla tribes to re-embrace the monophysitic religion; some of the natives also have accepted the tenets of the Protestant and Catholic missionaries. The native priests, originally slaves purchased in their youth by the Capuchin friars from the parents or slave-dealers, and brought up in the French seminaries, do not appear to enjoy much influence with their fellow-

countrymen. The Mahommedans have been more fortunate, and whole populations have fervently embraced the faith of Islam.

The bulk of the nation has, however, remained faithful to their nature-worship. Nevertheless the Gallas believe in Wak, Waka, or Wakayo, a supreme god whom they confound with the sky, and pray to for rain during the dry season, and for victory over their enemies. They have also other inferior gods, to judge from their names evidently of foreign origin. Such are Saïtan, the spirit of evil; Boventicha, the tutelar genius of the race; Oglieh, the god of generation, to whom sacrifices are offered at the commencement of the rainy season; and Atetieh, the goddess of fertility, whose feast is celebrated at harvest time, which falls at the end of the winter. Moreover, they worship all living things and all formidable objects of nature, such as the forests, rivers, woods, mountains, thunder, and the winds; each family has its protecting tree, often an olive, which is named after the Virgin, St. Michael or some other saint, watered with the blood of sacrificial victims reared on honey and beer. Of animals the serpent, "the father of the world," is the most worshipped, and many a cabin has its domestic snake. The northern Gallas have priests and sorcerers; these latter, called *kalisha*, greatly dreaded on account of their incantations, pretend that they can dispose of the future at their will, causing life or death, and conjuring the evil spirit. But still more terrible are the *buda*, or were-wolves, who transform themselves into wild beasts and cause death by a mere glance. Every person proved to be a "buda" is immediately butchered, and, as in mediæval Europe, it is the old women who usually fall victims to these popular superstitions. In the case of persons merely "possessed," an incessant drumming and exorcising is kept up, so as to drive out the *zar*, or evil spirit, and thus effect a cure. Thieves are scented out by the medium of a magician, or *béba-shiaï*, a high court functionary, who, according to Antinori, aided by the terror his shrewdness inspires, rarely fails to discover the culprit.

The Ilm-Ormas seldom practise polygamy, having only one wife, too often a mere slave charged with all the domestic duties, but considered unworthy to till the land, water the cattle, or milk the cows. The marriage forms are very numerous, and that of abduction is still honoured amongst certain tribes, the suitor's friends undertaking the seizure. He who manages to seize the young girl and carry her off in spite of her cries, becomes merely by this act her brother and protector; he brings her to the lover's hut, a cow is quickly killed, and the young girl sprinkled with its blood, which she also drinks. The union is henceforth inviolable, because the Ilm-Ormas, unlike the Somalis, "a nation of traitors and perjurers," never break their pledged word. However this abduction is often a mere pretence, the parents themselves bringing the sacrificial cow to the lover's dwelling. Sometimes it is the young girl who takes the initiative. She runs away from the paternal mansion bearing in her hand a tuft of fresh grass, with which she crowns the head of her lover; then kneeling down she strikes the ground to the right and to the left, as if to take possession of her chosen husband's residence. It even happens that the ugly or deformed girls, to whom no young man would be tempted to throw a necklet, the usual form of asking in marriage, are assisted by their parents at night

to climb over the enclosure round the house of the man of their choice. She stops at his door till morning, and if he does not succeed in driving her away by insults, she has conquered, and "as required by the laws of their ancestors," the young man is obliged to marry her, whether he desire it or not. When a Galla falls seriously ill and there is no hope of saving his life, to prevent him suffering useless pain, his friends stifle him by filling his mouth with clotted milk kept in place by a cloth. In some tribes the children and relations also kill their aged parents, even when not ill. The funeral ceremonies are regulated according to custom. A trophy of branches is placed on the tomb, indicating the wealth, position, and entire history of the deceased. The hair of women floating over the grave

Fig. 64.—POPULATIONS OF SOUTH ABYSSINIA.

Scale 1 : 6,000,000.



expresses grief and puts the evil spirits to flight. The elder brother inherits the wife and children; but if the deceased had no issue, his brother or relations must adopt or purchase an heir, who takes the dead man's name, and thus carries on the family. Children are frequently adopted by the Gallas; the wife gives the child suck, the husband gives it his thumb to bite, and the ties of relationship are henceforth inviolable.

The Galla communities, tribes or fractions of tribes, which bear a distinct name, differing according to their political surroundings and their upland or lowland place of habitation, may be reckoned by the hundred. Some of the clans have become Abyssinians by marriage and mode of life. Such are principally the Mechas of Gojam, the Jaggadas of Beghemeder, all nominally Christians; the Wollo

Mohammedans of the great plateau between Ankober and Magdala, and the heathen Borenas of the Abaï kwalla. The dreaded Assebos, the Rayas, Ejus, and Dawris on the passes and eastern slopes of the Abyssinian range, have for the most part preserved their primitive customs. The same is true of the independent or tributary Ilm-Ormas living to the west of Shoa, towards the sources of the Awash, and on the waterparting between the Abaï and the Gugsä, as well as the Jillis, Soddos, Hadas, Finfinis, Mettas, Nonnos, Gudrus, Horros, Jummas, and other tribes occupying the region formerly known as "Great Damot." A large tract of territory south and south-east of Shoa, towards Harrar, is inhabited by the Ittus and Arussis. Lastly, the Sidamas, peopling *Innarya* (Enarea), and Kaffa, in the south-western region of Abyssinia, are regarded as a branch of the Galla family. Amongst them Christianity had formerly the largest number of adherents and Abyssinian culture had made the greatest progress. Their colour is generally lighter than that of the other Ilm-Ormas, and the Arabs compare the complexion of the young Sidama girls to cinnamon. To the north some of the Sidama speak *Gonga*, a tongue related to the Agau, and current amongst the Damot Abyssinians north of the Blue Nile.

TOPOGRAPHY.

The political centre of Shoa occupies the watershed on the two slopes of the Abyssinian range, eastwards towards the basin of the Awash, and westwards towards that of the Blue Nile. In this country, where the climate is temperate, and where the soil, better cultivated than in any other Abyssinian region, produces corn and fruits in abundance, are grouped the civilised populations of Abyssinian origin, and here stood the cities successively chosen as capitals of the kingdom of Shoa. The palaces being merely large huts, it is easy to shift the site of the capitals, and the residence of the sovereign has changed several times during this century, according to the strategic advantages or the royal caprice.

Licheh, the present capital, founded by King Menelik, and hence the greatest market in the country, stands on a terrace at the western base of the mountains culminating in Mount Métatiteh, between two ravines forming the beds of two headstreams of the Jemma, an affluent of the Blue Nile. To the east on an isolated rock still nearer to the range, and in the vicinity of *Wat*, or the "Abyss," are the ruins of *Tegulet*, the "Town of Wolves," which became, after Aksum, the capital of Abyssinia, whilst its name was used for some time to designate the whole of Shoa. The fortress of *Tegulet*, which overawed the land, was taken by assault and destroyed in 1528 by Mohammed Grañheh, the conqueror of Abyssinia. A few miles to the south, on another terrace, over which auriferous streams fall in imposing cascades, lies *Debra-Berham*, or "Mountain of Light," which was the royal residence till the beginning of the eighteenth century. To the south-west, in the same river basin of the Jemma, two small wooded heights, surrounded by formidable gorges, bear at an elevation of some 9,300 feet the houses of *Angolala*, another abandoned capital, founded in 1830 by King Sehla Sellasieh. Lastly, there exists a fifth capital,



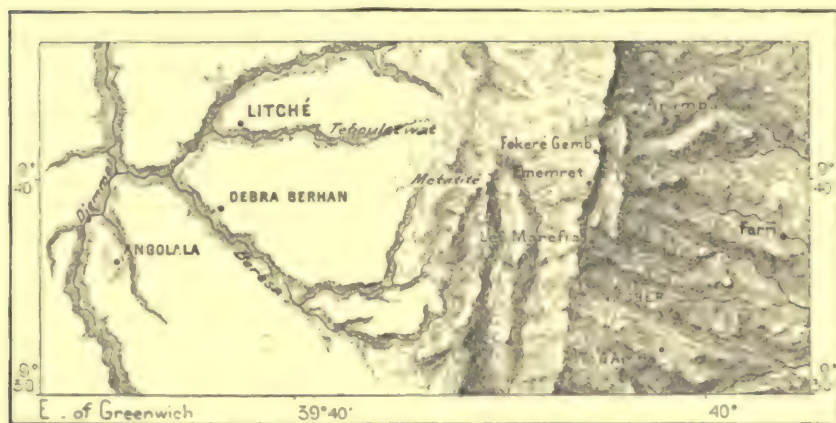
GENERAL VIEW OF ANKOBER.



historically more famous than the others, as a place where many European explorers have rested, and as the point of departure or arrival for the Red Sea caravans. *Ankober*, the very name of which place recalls the fact that from the remotest times dues were here levied on foreign wares, is also the residence of the higher ecclesiastical functionaries. Ankober, a 'labyrinth of paths winding between the city huts, is delightfully situated on the ridges of a sphinx-shaped mountain which projects eastwards of the main chain, commanding a valley whence the waters drain southwards to the Awash. Close by to the north is the station of *Let-Marefia*, which the Italian explorers Cecchi, Chiarini, and Antonelli chose for their astronomical observations. Let-Marefia lies at the bottom of an old crater, whence the lava-streams were discharged to the south-west. These lavas and adjacent terrace lands are encircled by an amphitheatre of hills, two of which, or rather two fragments of the Abyssinian plateau connected with the uplands by narrow ridges bordered with

Fig. 65.—CHIEF TOWNS OF EAST SHOA.

Scale 1: 650,000.



precipices, bear the two ambas of *Emanbret*, or *Ememret*, and *Fkereh-Gemb*, which are regarded by the Abyssinians as impregnable. The latter fort contains in its terminal tower the treasures of King Menelik and the supplies for his army. To the north, in the valleys of the spurs, the villages of *Aramba*, *Kokfara*, *Daweh*, *Majettieh*, and several others follow in succession as far as the country of the Eju Gallas.

In the remote future, when the question of connecting southern Abyssinia with the Red Sea coast shall be seriously thought of, three natural routes indicated by running waters cannot fail to be explored: to the north that which descends from the plateau of southern Lasta by the river Golima, and is lost in a depression flooded by brackish waters; and farther south, under the latitude of Magdala, that following the Melleh or Addifuah River valley as far as the confluence, and thence to the Awash and Lake Aussa, where it rejoins the caravan route towards Tajurah Bay. Another route, as yet unexplored by Europeans, descends from the Argobba

towards the Awash by the market-towns of Daweh and Mejetieh. Abargues de Sostén claims to have explored these two northern routes in their upper part, in spite of the vicinity of the dreaded Dawri tribes. Bianchi has recently attempted to explore another and more northern route, from Makaleh to the port of Assab, by way of the country of the Taltals; but he was compelled to retrace his steps. The presence of ferocious peoples on the spurs prevent traders from visiting this part of the Abyssinian watershed, whilst the caravans coming from the Red Sea coast or Tajurah Bay are compelled to make a complete detour from the direct route to reach the provinces of Shoa. From Tajurah to the town of Ankober, the usual caravan route is about 360 miles, some 120 to 150 miles longer than the direct route towards the plateau.

At present the most frequented route between Ankober and the shores of the Indian Ocean is that which passes through the principality of Harrar, terminating in the port of Zeila. From the Shoa uplands, it descends at first to the town of *Aliu-Amba*, inhabited, like the neighbouring village of *Abderasul*, by merchants, slave-dealers, hotel-keepers and muleteers of all races, nearly all of whom, however, are zealous Mussulmans. After paying the custom-house duties, the caravans pass on to *Farreh*, or Farri, the last village of the province of Efat, built at a height of 5,560 feet on a projecting terrace; then skirting the craters and lava-fields, they reach the Awash, which they cross to enter on the great plain of *Mulhu*. Beyond this point the caravans proceed over the hills of a watershed, belonging to the country of the Ittus, thence redescending into the plain of Harrar. Some 24 miles west of this town is the little Lake Haramoya, near which the French explorer Lucereau was assassinated in 1881.

HARRAR AND ZEÏLAH.

The town of *Harrar*, also called *Harrrayhek* by the Abyssinians, *Ada* or *Adari* by the Somalis, and *Herrer* by the Egyptians, is stated by travellers to be exactly midway between, or 170 miles from, Ankober and Zeila. Lying at an altitude of 5,600 feet, Harrar enjoys a relatively temperate climate, from 54° to 59° F., and is surrounded by fertile fields and groves of diversified vegetation. A delightful and well-watered oasis situated on the border of the arid regions, Harrar could support itself, even if it had no commercial relations with the neighbouring countries. But it is moreover an important market-town, and its two ports, Zeila and Berbera on the Somali coast, keep up a brisk trade with Egypt and Arabia. In 1883 it had an European settlement of five persons. Said to have been founded three centuries ago, it is the most populous city in the whole of Abyssinia, and even one of the largest on the continent, for from Cairo to Zanzibar, a distance of 2,400 miles, its only rival is Khartum. Accordingly the Egyptian Government took possession of it in 1875, so as to protect this precious market from the attacks of the surrounding Somali and Galla tribes; but the garrison of from four thousand to five thousand soldiers, more dangerous than the nomads in the vicinity, has exhausted the country by oppression and plunder. The English, who as they

possess the seaboard, are the heirs to Egypt, have already taken the necessary steps to secure this prize, which Burton was the first Englishman to visit, in 1855. On withdrawing the Egyptian garrison they hoisted the British flag on the walls. The king of Shoa, who was also desirous to obtain this town, had not sufficient strength to struggle against such rivals.

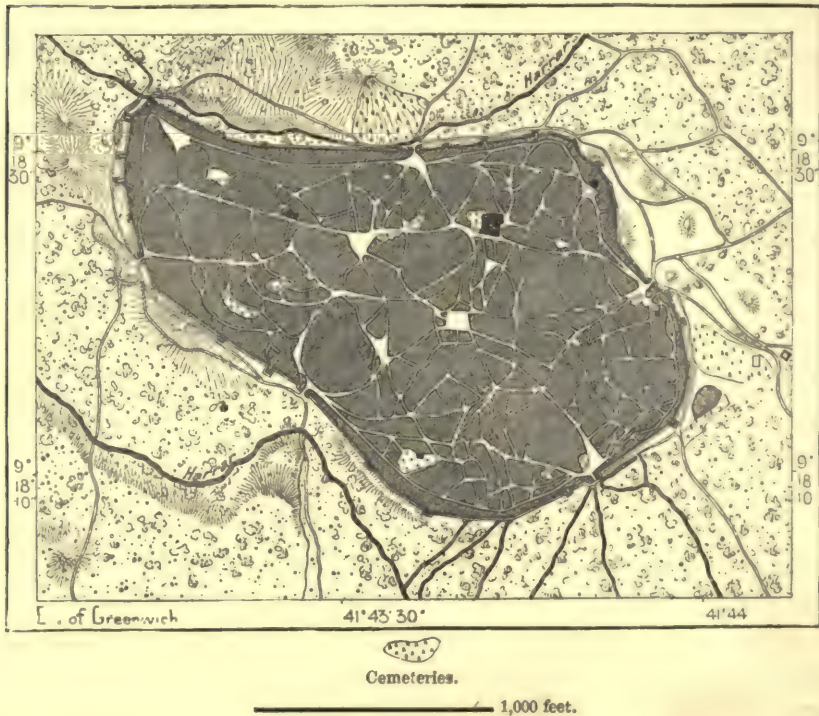
Harrar, whose shape may be compared to that of a pear, lies on a granite hill which gradually tapers to the west. To the south Mount Hakim commands the town from a height of some 660 feet, giving birth to many streams, which water the gardens of Harrar and become lost in the marshes before reaching the Wabi, a tributary of the Indian Ocean. The numerous grottoes of Hakim are inhabited by long-tailed yellow monkeys, with thick manes. Contrasting with the scattered dwellings of other Abyssinian cities, the nine thousand five hundred terraced dwellings of Harrar, covering a space of only 120 acres, and built of calcareous rock full of vegetable fossils, are crowded together within a rampart of stones flanked by embattled towers. The houses have few openings on the narrow, winding, steep lanes, whilst the few irregular squares usually open on the mosques; the largest public space, called the *Meidan*, occupies the summit of the hill. The Harrari, nearly all merchants, are fanatic Mussulmans of the Shiah sect, like the Persians and several tribes of Southern Arabia. From these countries probably came the missionaries who converted the Somalis and Gallas to their faith, and whose descendants constitute the present population of the city. When the Harrari meet together to chew the leaves of the kat (*celastrus edulis*), which is as highly prized by them as by the natives of Yemen as a stimulant, they begin and end the evening with readings from the Koran and acts of thanksgiving, "because this holy plant enables us to prolong our vigils longer into the night, in order to worship the Lord."

The society of Harrar differs from the rest of the Mussulman world in the respect that is shown to women. Before the arrival of the Egyptians, the emir, alone of all the inhabitants of this country, had more than one wife, whilst divorces, so common in other Mohammedan countries, are here of rare occurrence. Besides, the women are unveiled, and sell the products of their gardens in the bazaar, the men taking on themselves all the hard work; and this town is also distinguished by its love of letters. According to Mohammed Mukhtar, all the children read and write Arabic, although it is a foreign language differing greatly from their own, which is either of Galla origin, or according to Burton and Müller, of Semitic stock. But they write the letters vertically, instead of from right to left. They have a certain literature, and their writers do not restrict themselves to mere comments on the Koran. One of the local industries is bookbinding. Although essentially a commercial town, Harrar has scarcely any industries, excepting that of its highly prized potteries, and its manufactories of togas, the black robes and mantillas worn by the women, and the red garments reserved for the young girls. Most of the other manufactured articles are imported from Arabia, and the chaplets worn by the Harrar people are made by immigrants from Hadramaut. Since the people have exchanged their independent state for the Egyptian rule, they have lost much of

their property, the population has diminished, and hyænas prowl around the town-walls. Coffee-growing is the principal occupation of the region around Harrar and in the plains tilled by the Gallas; the berry, which is of a superior quality, is exported from Hodeidah and Aden, under the name of "Mocha." Like the Yemen Arabs, the Harrari do not infuse the coffee, although they drink decoctions of bark and dried leaves. Tobacco, the opium poppy, bananas, oranges, and grapes are also produced on the plains of Harrar; the potato has recently been introduced, and all the vegetables imported from Europe have thrived well. In its forests

Fig. 66.—HARRAR.

Scale 1: 9,500.



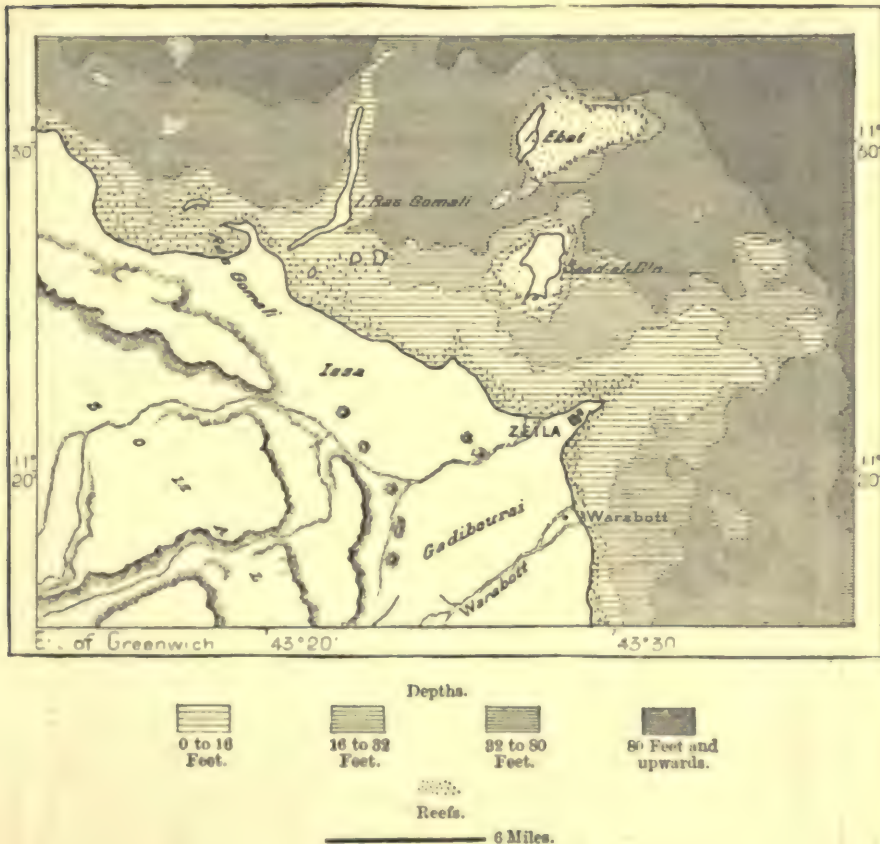
Giuletti has discovered the *coffar*, or musical acacia, which Schweinfurth describes on the banks of the Nile, at the confluence of the Sobat.

Two routes, often blocked by the inroads of plundering hordes, lead from Harrar to Zeïla. One crosses a ridge to the north of the town, thence redescending into the basin of the Awash by the Galdessa Pass and valley, and from this point running towards the sea through the Issa territory, which is crossed by a chain of trachytic rocks trending southwards. The other and more direct but more rugged route ascends north-eastwards towards the Darmi Pass, crossing the country of the Gadibursis or Gudabursis. The town of Zeïla lies south of a small archipelago of islets and reefs on a point of the coast where it is hemmed in by the Gadibursi tribe. It has two ports, one frequented by boats but impracticable for ships, whilst the other, not far south of the town, although very narrow, is from 26 to 33

feet deep, and affords safe shelter to large craft. According to Rochet d'Héricourt, it is not of sufficient size to accommodate more than eight or nine vessels of from three to four hundred tons. In the vicinity of the town lies a large saline plain, whence the Issa camel-drivers obtain the salt which they sell to the Harrari at a high price. Zeila has no springs; hence every morning a long string of camels is dispatched to seek the necessary water in the wadi of Tacosha. Three-fourths of the population consists of Issa Gallas, and every evening the village resounds with

Fig. 67.—ZEILA.

Scale 1: 400,000.



their warlike or other national songs. A small English garrison from Aden now occupies the town, so that there is some hope that the slave-trade may at last be suppressed, of which Zeila has hitherto been one of the principal centres.

TAJURAH, OBOK, ASSAB.

The route between Shoa and Tajurah Bay does not enjoy, like that of Zeila, the advantage of a midway station such as the city of Harrar; still the principal town of the *Aussa* district, situated near the southern bank of a fresh-water lake, which receives the waters of the Awash, may be regarded as a veritable town. It is a

collection of more than a thousand huts where are settled the merchants and camel-drivers of the Modaito Danakil tribe, and was once the capital of the Mussulman kingdom of Adel. From Aussa to Tajurah Bay follow in succession several other groups of cabins also belonging to the Afar tribes, and the northern shore of the bay is bordered by widely scattered hamlets and villages. Amongst others is that of *Sangalo*, which served till recently as the port whence the Galla slaves were shipped to Arabia, and which was annexed to France in 1882 by the French explorer

Fig. 68.—COURSE OF THE LOWER AWASH.

Scale 1 : 2,700,000.



Solellet. Still farther east the hamlet of *Ambabo* stands on a beach whence slaves have also been frequently shipped in spite of the French or English cruisers which are stationed on the shores of the Indian Ocean. Beyond *Ambabo* stands the town of *Tajurah*, which has given its name to the great bay reaching some 36 miles into the interior. Like *Sangalo*, this village has been ceded to France by the chief of the Ad-Ali tribe, but neither of these hamlets were formally taken possession of till the year 1884. The beach of *Tajurah* is unfortunately almost level; the port is

badly sheltered, and not of sufficient depth to admit vessels of small tonnage. The only part of the coast where the French have at last founded a permanent station, after having ignored the deed of concession, which was signed in 1862, for over twenty years, is on the eastern peninsula of the Danakil country, between the Bay of Tajurah and the mouth of the Red Sea. The hamlet of *Obok*, in the immediate vicinity, has given its name to the whole of the annexed territory, and here in 1881 the first commercial house was opened by Arnoux, a merchant who later on perished in a tribal feud.

Obok offers great advantages as a port of call for steamers. Situated near the

Fig. 69.—TAJURAH BAY AND LAKE ASSAL.

Scale 1: 900,000.

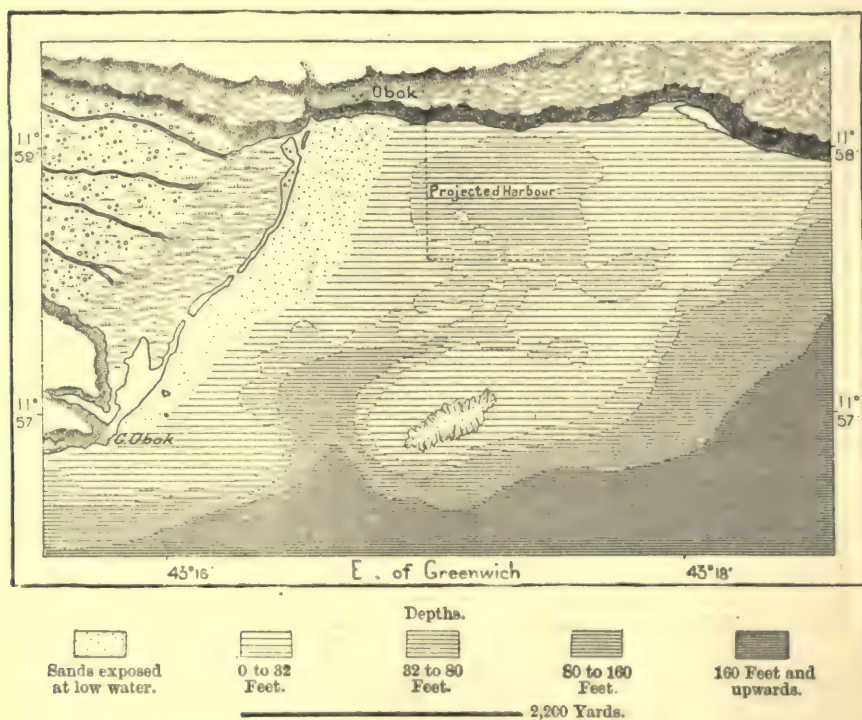


Strait of Bab-el-Mandeb, it commands the passage to much greater advantage than the town of Aden, and transports could here put in for coal without altering their course. Although this port cannot be compared to that of Aden, yet it possesses a good anchorage, which might be completely sheltered at small cost. It is separated from the high sea by coral reefs, in which are openings accessible to large ships; the north and north-easterly winds, so feared by sailors, are deflected from the harbour by Râs-el-Bir, or "The Promontory of Wells," which projects into the sea north of Obok. The gradually widening valley, where the buildings of the growing village are beginning to replace the thickets of acacias and other trees, is commanded by a coralline cliff about 60 feet high, the ravines by which it is

intersected serving as channels for the floods during the rare rainfalls. The upper terrace is itself separated from the plain of the Danakils by a second somewhat less elevated cliff. Although the station of Obok suffers greatly from drought, the district might be reclaimed, and travellers, comparing the vegetation of Obok with the naked and burning rocks of Aden, describe this new station as an oasis. On sinking wells in the valley water is everywhere found at a depth of from 3 to 5 feet, a little brackish near the shore, but perfectly sweet farther inland. King Menelik has granted a formal concession to a French explorer to build a narrow-gauge railway between Ankober and Obok. Many of the caravans coming

Fig. 70.—Obok.

Scale 1 : 54,000.



from Shoa have already commenced trading with this settlement. The extent of the lands on the northern shore of Tajurah Bay that have been conceded to France is estimated at 1,200 square miles.

The commercial rivalry existing between the European nations, which has made Zeila an English city, and which now creates the French town of Obok on this coralline African coast, also caused an Italian colony to spring up on the same seaboard in 1870. Southern Abyssinia, till recently almost cut off from the world, will thus possess for the exportation of its commodities three maritime ports belonging to as many different foreign powers. No serious attempts to utilise the town of *Assab* were made till 1882. The new town, which already possesses several buildings in the European style, lies 72 miles directly north of Obok, and

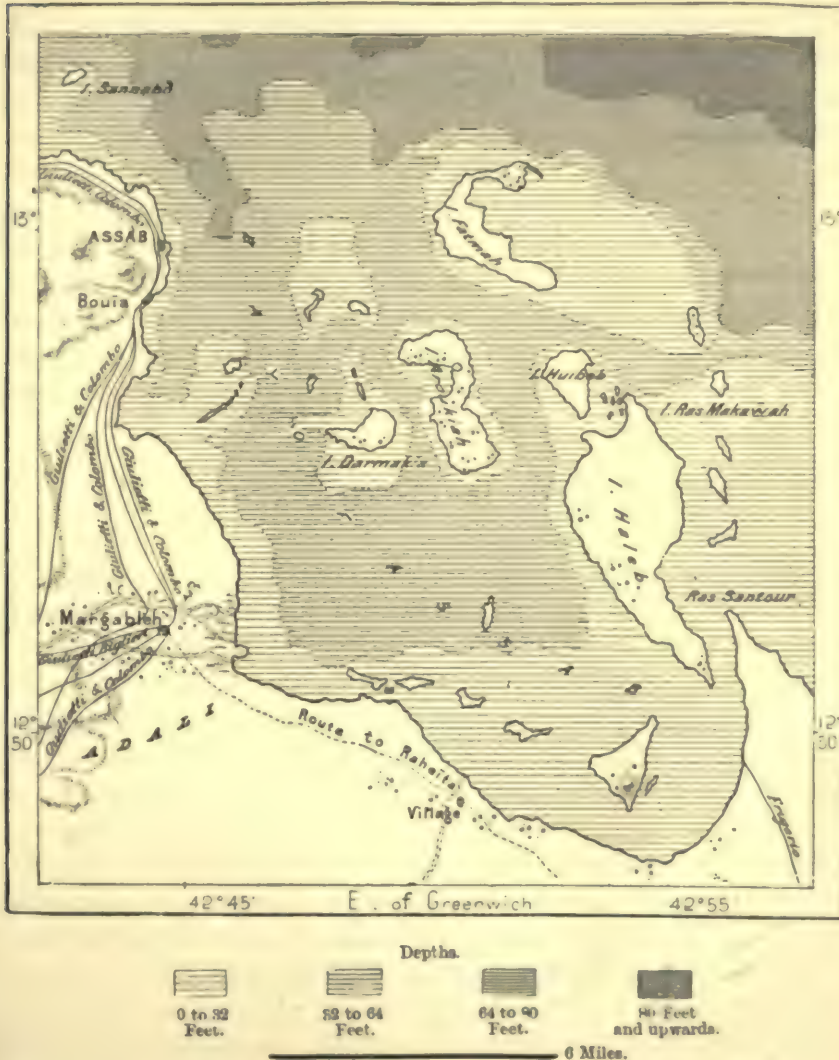


OBOK—VIEW TAKEN FROM THE ROADSTEAD.

36 miles from Bab-el-Mandeb, north of a long littoral indentation. Numerous islets scattered at the entrance of the harbour shut out the sea, excepting to the north-east, and are continued by reefs which the sand, mud, seaweed and coral are gradually causing to encroach on the bay, so that these islands must sooner or later become a peninsula of the mainland. The well-protected port, situated on

Fig. 71.—ASSAB.

Scale 1 : 280,000.



the beach of *Bouia*, about half a mile south of Assab, affords anchorage to the largest vessels within 500 feet of the coast. The territory of Assab is a shifting dune or hard rock nearly destitute of vegetation. Near the neighbouring village of *Margahleh* are a few pools of water fringed with verdure; here and there the Afar huts are shaded by some clumps of palms, while along the intermittent streams the brushwood is matted together by a network of creeping plants. The

town of Assab, having to obtain pure water by distillation, and possessing no arable lands or agricultural industries, cannot expect a great commercial future; its only product is salt, and even this cannot be worked in safety. But the few Italians in Assab, round whom are grouped some five hundred Arabs, Afars, and Somalis, are making great efforts to establish permanent relations between their station and the towns of Shoa. Although at a great distance from the rich countries of the interior, being at least twenty-two and usually twenty-five days' march from Ankober, Assab has begun to import some merchandise, such as coffee, hides, and other products, thanks to the efforts of Antonelli, Bianchi, and other travellers. But this slight traffic can only be carried on under the guidance and protection of the natives. The explorer Giuletti and several companions, hoping to pass through under the safe conduct of the neighbouring tribes, were assassinated at seven or eight days' march into the interior. Nearly all the trade carried on with Aden and Hodeidah, is conducted by means of *sambucs* ranging from seven to ten tons burden, and the annual movement which takes place in the port numbers some four hundred vessels. The town of *Rakeita*, situated farther south, is the residence of a sultan, who is also a wealthy dealer in mother-o'-pearl, ostrich-feathers, incense, myrrh, and other products of this coast region. The littoral town of *Baibul*, to the north, is the residence of another sultan under the protection of the Italian Government.

DEBRA-LIBANOS, ROGEH, DILDILLA.

In the western region of Shoa, the most important place is the commercial town of *Ficheh*, built at the angle of a plateau, between deep kwallas. Near here stands the famous monastery of Debra-Libanos, or Mount Liban, built on a trachytic terrace from which runs a little rivulet, looked upon as holy by Christians, Pagans, and Mussulmans alike. Pilgrims come from all parts to bathe in these miraculous and healing waters, which were created by the voice of Tekla-Haïmanot, the legendary saint of the Abyssinians. At the time of the voyage of Combes and Tamisier, the monastery was occupied by three thousand monks, two-thirds of whom were old soldiers mutilated during their expeditions into the Galla country. No other place of refuge is more respected than Debra-Libanos. Before crossing the escarpments of the sacred mountain the pilgrims must cleanse themselves from their sins in the waters of the Ziga Wodiem—that is, “flesh and blood”—which flows through a deep gorge. On a neighbouring height, whence a view over the valley of the Abai can be had of the Gojam and Damot mountains, stands an ancient fortress which served as a place of refuge for one of the ancestors of Menelik, at the time of the conquest of the country by the “Left-handed.” Zena-Markos, another monastery situated north-west of Ficheh, on a plateau surrounded by ravines, is almost as opulent and as much frequented as that of Debra-Libanos. To the north the plateaux, as far as Magdala and the sources of the Takkazeh, are occupied by the Wollos and other Galla peoples. The Wollos, who are divided into seven tribes, are immigrants come from the south in the sixteenth century, at the

time of the invasion of Grañheh. But on settling down they adopted many of the customs of the Amharinians, whom they had dispossessed; abandoning their nomad life they became agriculturists and adopted the toga, although they retained their Mohammedan faith. In the northern part of Wolloland, on a rock possessing excellent natural defences, the King of Shoa has founded the stronghold of *Woreilla*, near the confines of Abyssinia properly so called. This place has become a very important market for exchanges between the two realms, and here the Emperor Johannes usually gives receptions to his vassals.

All the territory south-west and west of Shoa belongs also to the Ilm-Ormas, and possesses large collections of buildings almost worthy the name of towns. The barren northern slopes of Mount Hierer, or Jerrer, are covered with the huts of the large Mussulman village of *Rogeh*, or *Rogieh*, which, situated on one of the affluents of the Awash on the confines of Gurageh, in the territory of the Galla tribe of the Galen, has a large trade in coffee, and is still the chief slave-market in southern Abyssinia. This traffic is officially forbidden in the possessions of King Menelik, and the captives are not publicly exposed, but they are secretly sold and sent to the sea-ports, whence they are exported to Arabia or Egypt. In 1878, the explorers Chiarini and Cecchi found the "current price" of the Galla slave to vary from thirty or forty Maria-Theresa crown-pieces for a young and good-looking girl, to four for an old woman. All the inhabitants of Rogeh, numbering some 10,000, claim to be of Tigré stock, and are said to descend from two Mohammedans who immigrated some centuries ago. The plain of Finfini to the west, near the sources of the Awash, and at the mouth of a formidable gorge, is frequently selected by the sovereigns of Shoa as the rallying-point where the armies assemble for expeditions into the Galla country. Hot springs, at which the cattle drink, spout forth in the plain, and the neighbouring mountains furnish an iron ore from which nearly all the Shoa hardware is manufactured. The rocks in the vicinity are honeycombed with grottoes, one of which has several naves with elliptical vaults, separated from each other by square pillars which grow thinner towards the middle. These works of art, in a country now occupied by the miserable dwellings of the Katelo Gallas, are a standard by which the decadence of civilisation can be measured. On the solitary Mount Endotto, west of the plain of Finfini, formerly stood a capital of the kingdom of Shoa, and here the tombs of its ancient kings are still to be seen. It is now the residence of a *râs*, or chief. In this region, one of the most fertile in Abyssinia, the French explorer, Arnoux, obtained from Menelik a grant of 250,000 acres of land, on which he intended to establish a European colony. When easy routes through the valley of the Awash are opened between it and Tajurah Bay, this region will doubtless become one of the most productive in Africa. Meanwhile the graftings of wild olives and the chinchona plantations are preparing the future wealth of the country. The King of Shoa has recently chosen as his residence the village of *Dildilla*, west of Finfini; it is one of the temporary capitals of the kingdom, and is moreover placed in an excellent strategic position to watch over the Galla populations.

Beyond the Awash stretch the Galla republican confederations and small

monarchical states, with uncertain frontiers, mostly divided from each other by desert tracts, or "hernes," as D'Abbadie calls them on his map. Gurageh, on the upper affluents of the Waïsa and Wabi, is one of these states, an upland region separated from the Awash and the kingdom of Shoa by the Soddo country. This state is looked upon as holy by the Abyssinians, because, according to a legend, the five islets in Lake Zwaï are said to be the only Christian land which was left unconquered by the terrible Grañheh, whose soldiers were afraid to venture on the rafts built to transport them to the archipelago. On these islets are convents in which some ancient MSS. are preserved. All the people of Gurageh still claim to be Christians, although they have neither priests, churches, nor religious tenets. They content themselves with repeating the names of a few saints, and cursing the Pagans and Mohammedans. Although relapsed into barbarism, the people of Gurageh have still preserved the art of building far more elegant dwellings than those of all other Abyssinians, excepting those of Gondar. In order to protect themselves against the Soddos and other nomad Gallas, the people of Gurageh have excavated pits here and there in which they conceal themselves on the approach of the enemy, whose passage they watch, often attacking them unawares, and even occasionally cutting off their retreat when in sufficient numbers. *Gorieno* is the capital of the country, and *Ghebisso* its chief market, although a less important place than *Mogar*, which lies farther westwards in the Kabena country. Gurageh and Kabena, often held as belonging to the same political group, differ entirely in manners, religion, and speech. The Kabena are fanatical Mussulmans, and were the King of Shoa not to keep good order, they would be continually warring against their Christian neighbours; they are the chief slave-hunters for the markets of Rogeh and *Abderasul*. The Kabena country produces the best tobacco in all southern Abyssinia.

The Galla region, where the Awash rises, and which separates the two great curves of the Blue Nile and the Gugsä, is mainly occupied by Liben communities. Farther west the valleys overlooked by the lofty Jimma-Lagamara Alps are peopled by republican tribes, as are also the plains of Gudru, tributaries of the Blue Nile. Beyond this point, towards the region of the Bertas, follow in succession the Alatus, Wobos, Washitis, and Wasas, all tribes of Orômo origin, concerning whom travellers have hitherto collected the most contradictory accounts. The Italian Cecchi is as yet the only traveller who has succeeded in crossing at this point the large river Ghibeh, a northern affluent of the Gugsä. This formidable watercourse, some 4,000 feet broad after the rains, is crossed in narrow canoes hollowed out of tree-trunks. The portion of the country stretching westwards to the mountains of Jimma-Lagamara towards the sources of the Jabus, is covered with vast forests.

To the south the two kingdoms of Guma and Limmu are still mainly in the basin of the Orghesa or Didesa, one of the largest but one of the least known rivers in the Abaï system. The town of *Chora*, capital of Guma, is situated on an affluent of this watercourse; whilst *Saka*, the great market of Limmu, stands on a rivulet flowing to the Indian Ocean. Similarly situated are the towns in Innarya

or Ennarea, and all the other southern Galla states, Jimma-Kaka, or "Kingdom of Abba-Jifar," Gera, Yangaro, Sidama, Kullo, Ghimira, and the great state of Kaffa, the largest country peopled by Gallas which recognises the suzerainty of Abyssinia. Like the provinces of Abyssinia properly so called, all these states are variously divided into degas, voïna-degas, and kwallas; but on the whole the intermediary zone is the most important, for in it are centred all the chief towns and market-places. In Jimma and Guma the lands belong mainly to the zone of the upland plateaux, and barley is here chiefly cultivated; the lowlands occupy a larger extent in Innarya, Limmu, and Kaffa.

INNARYA.

The name of Innarya was formerly applied to a far more extensive region than that which has preserved this appellation. Like Abyssinia it was a Christian kingdom, and for centuries its Sidama inhabitants successfully resisted the surrounding Pagans and Mohammedans. But the Limmu-Gallas, occupying the upper basin of the Orghesa, at last seized the country and, when they embraced Islam, forced their new religion upon the conquered Sidamas. The people of Innarya, now governed by a queen, are Mussulmans, although the name of Sidama, which has no longer any definite meaning, is still used as a general term for the Christians of the Abyssinian countries bounded north by the course of the Abaï. Innarya, properly so called, no longer comprises more than the upper valley of the Gugsä, where this river still flows northwards. The lowlands and slopes of this valley are pre-eminently fitted for coffee culture, the shrubs being far finer than those of Kaffa, from which country the plant has received its name. Coffee-plants are said to be found in Innarya some 8 to 10 feet in circumference. Coffee is monopolised by the king, and his slaves alone have the right to gather and sell it for him in the market of Saka. The gold-dust, which was formerly the chief wealth of Innarya, is no longer found in sufficient quantities for exportation.

Although they have lost their ancient civilisation, the people of Innarya are still said to be the most civilised nation of southern Abyssinia, and to excel even the Abyssinians as artisans. The market of Gondar can show nothing superior to their embroideries, or to their weapons with carved silver-mounted hilts. They manufacture iron instruments, which are exported even as far as the tribes occupying the basin of the Sobat. A fortified custom-house defends from the north the approaches to Limmu from Abyssinia. Many of these upland states are almost entirely enclosed by a belt of double walls, moats, and drawbridges; moreover a large moor, on which no one has the right to settle, spreads round the country, protecting it like the moat of a stronghold. Each kingdom resembles a besieged fortress. As can be well understood, communications in this country are a matter of great difficulty. Whilst a pedestrian could traverse in four days the forty miles between the great market of *Basso*, in Gojam, and that of *Saka* in Innarya, the caravans have even taken two years to accomplish this journey.

YANGARO.

Yangaro (Janjero, Zinjero), south-east of Innarya and east of Gimma-Kaka, comprises a portion of the hilly slopes draining to the Gugsä. In no other country are the "rights" of the reigning house better safeguarded by legal guarantees. Excepting the king, his children, and the low-caste peoples who are too much despised to be feared, Beke was unanimously informed that all the males were partially mutilated, so as to incapacitate them for the throne. One of the king's thousand privileges is the use of certain medicines which are forbidden to his subjects. The people having no other animal food than beef, all suffer from tape-worm like the northern Abyssinians; but the king destroys this parasite by the use of a decoction of kusso, while the common people, not daring to touch the "king's medicine," have to content themselves with bitter herbs. Amongst other strange stories told of this mysterious Yangaro country, the missionaries Isenberg, Krapf and Massaya, relate that human sacrifices are very common, a new-born child being frequently immolated to their divinities. Immediately after their birth the males are said to have their breasts cut off, so that the future warriors may in no way resemble the "soft sex." When the slave merchants take captives of this country they never fail to throw the most beautiful into a lake, so as to render fate favourable to their voyage; but they rarely succeed in capturing males, who usually commit suicide rather than accept slavery. The name of Yangaro has often been ironically confounded with that of Zinjero, which signifies "monkeys" in Amharic; hence the reports often heard of a race of enslaved monkeys existing in Africa. Gimma-Kaka, or Kingdom of Abba-Jifar, is one of the regions which supply most slaves to the merchants or jibberti. According to Beke, nearly all the slaves brought from the northern and eastern Galla territories are made eunuchs by dealers settled in the town of *Folla*.

KAFFALAND.

The country of Kaffa is one of those whose people still claim to be Christians, although a long isolation has effected a marked change between their practices and those of the Abyssinians. There are said to be only six or eight churches in the country, centres of widely extended parishes and sanctuaries for the criminals and oppressed classes; the kings are buried under one of these sanctuaries. According to Massaya, the Kaffa Christians are ignorant even of the name of Jesus Christ, and worship the three saints, George, Michael, and Gabriel. Exceedingly scrupulous in the observance of their customs, which chiefly apply to the nature of their food, the people of Kaffa never eat corn of any description, and to call them "graminivorous" is considered an insult. Their only vegetable food consists of the stalk of the ensete banana, which is cultivated around all their villages. The ordinary grains, such as wheat, barley, and haricots, are used merely as food for cattle and the brewing of beer. They are no less exclusive as to meat-eating, the ox being the only quadruped whose flesh they are allowed to eat. But the men, more

fortunate than those of Yangaro and other neighbouring states, are also allowed to eat poultry. According to custom, if the women eat this latter food they lose their liberty and are immediately sold as slaves, the traffic in human flesh not being forbidden to the Christians of Kaffa, as it is to those of northern Abyssinia. Their clothing is also rigorously regulated, skins, tanned or untanned, being forbidden; their garments are made of cotton tissues or coarse stuffs woven from the fibres of the ensete. Although *Bonga*, the capital of Kaffa, may be "the largest town existing in Abyssinia," and an active market, money was hardly known there in the middle of this century. The only mediums of exchange were glass beads and the salt imported from Sokota. To the south-west, in the Sheka or Siaka country, the natives collect gold-dust from the sands of the rivers. The sovereigns of Kaffa maintain a ceremonious etiquette nearly as rigorous as that of the kings of Yangaro. According to Soleillet, who has recently penetrated into this country, the ministers and grandees of the kingdom cannot speak to their master unless covered with fetters like slaves, although they are separated from the royal presence by a curtain. To shun recognition the king himself goes out shabbily clothed and mounted on a miserable horse; but his escort is observed from afar, and everyone hides so as to escape the consequences of meeting him. In this country of etiquette the formula of salutation is, "I hide myself under the earth." When the Christian priests still resided in the country, the faithful were bound never to let them touch the ground between the mission-house and the church, so they were carried on the shoulders of strong men. It is related that these priests being unable to go to Gondar to receive consecration from the abuna, had brought to them by caravan a precious box which the "father" had filled with his sacred breath.

South of Kaffa, on the watershed of the Indian Ocean, stretch the forests peopled by the mysterious Dokos, that is to say, in Galla, the "Ignorant," or the "Savages." According to Krapf, Isenberg, and most other explorers, the Dokos are dwarfs, like the Akkas of the Welle River, whilst D'Abbadie asserts they are in no way different from their neighbours, the Swaheli.

The King of Shoa, absolute in his kingdom, exercises only an indirect influence over the small tributary Galla states, and the southern kingdoms have been induced to accept the suzerainty of the "king of kings," less through his influence than that of the *râs* of Gojam, who controls the trade routes leading from Gondar and Sokota to Kaffa. However, the material power of the King of Shoa over the surrounding countries has greatly increased during the last few years, thanks to the organisation of his army, which already comprises a body of permanent troops amounting to a thousand riflemen. In time of war, when the great *nagarit*, or war-drum, is beaten, this corps is followed by crowds of warriors and plunderers. According to Chiarini, the armed rabble occasionally amounts to nearly a hundred thousand persons. The tribute paid to the negus by the kings of Shoa and Gojam is very considerable. Besides a present of Maria-Theresa crown-pieces, the sovereign of Shoa is said to be obliged to supply his master with a hundred thousand oxen, two thousand horses, and two hundred leopard skins.



CHAPTER VIII.

UPPER NUBIA.



THE whole of the northern and western watershed of Abyssinia, with the exception of the basin watered by the Barka, is known by its hydrography to belong to the Nilotic system. The region watered by the Blue Nile and the Atbara, with their affluents, is geographically sharply defined westwards by the Bahr-el-Abiad, or Great Nile, and eastwards by the advanced promontories of the Abyssinian plateau. To the south the water-parting between the Tumat, a tributary of the Blue Nile, and the Sobat, one of the main branches of the White Nile, is partly composed of mountains or high hills which have not yet been crossed by European explorers. An unknown land, with an area equal to that of Belgium and Holland together, stretches beyond these limits, and here the frontiers are more effectually guarded by its savage, warlike, or wandering peoples than by a line of fortresses and custom-houses. The zone of separation between Upper and Lower Nubia is formed by the relatively small region which separates the Nile at its junction with the Atbara from the waters flowing to the Red Sea. With these boundaries the whole of the plains between the Nile and Abyssinia constitute the region of Nubia, usually designated under the name of Eastern Sudan, although the term of Beled-es-Sudan, or "Land of the Blacks," should be restricted to lands inhabited by Negroes. The total superficial area of this region may be approximately estimated at 224,000 square miles; the population of the whole territory, extremely dense in the basins of the Tumat and Jabus, may perhaps number 3,000,000.

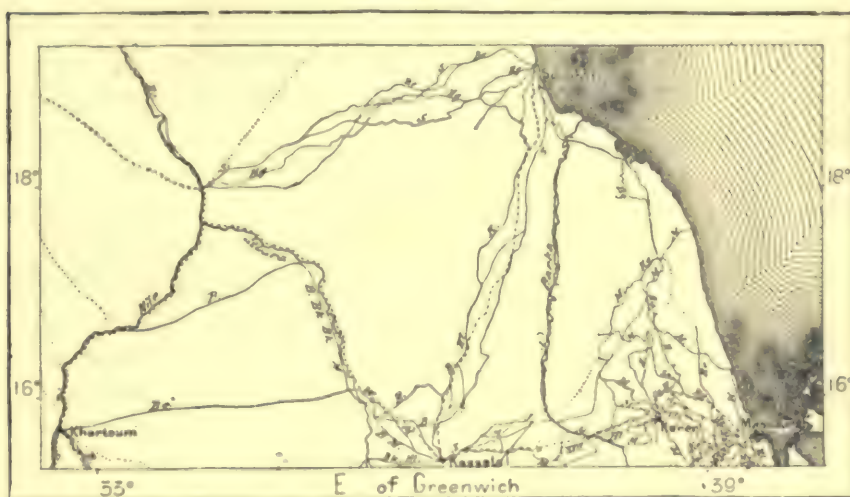
PHYSICAL AND POLITICAL FEATURES.

Forming a distinct domain to which the general slope of the soil gives a certain geographical unity, eastern Sudan consists of distinct basins verging slightly north-westwards along the Blue Nile and Atbara, and diverging northwards along the Mareb and Barka. It is cut up by isolated masses on the plains, by chains of hills and desert spaces, into natural provinces which the tribes engaged in war have converted into so many petty states, whose frontiers are changed according to the fortune of war and the constant inroads of the nomad peoples. The more scanty

the population, the more they break up into independent groups, never communicating with each other except through the medium of occasional traders. Nevertheless native states, become powerful by agriculture and commerce, have sprung up in this region, gradually extending the sphere of their influence over the surrounding peoples. Thus was formerly founded, under the influence of the Egyptian civilisation, the kingdom of Meroë, which comprised not only "the island" bounded by the Astapus and Astaboras, but also the neighbouring countries. After the introduction of Mohammedanism the kingdom of Senaar was developed, which also exceeded the limits of its "island" or peninsula, between the White and Blue Niles. But the position of Upper Nubia between the plateaux

Fig. 72.—ROUTES OF THE CHIEF EXPLORERS IN TAKA AND NEIGHBOURING DISTRICTS.

Scale 1 : 8,000,000.



Itineraries.

B. Burkhart, 1814.
El. Rüppell, 1832.
K. Katta, 1836.
Ab. D'Abbadie, 1838-48.
F. and G. Ferret and Galinier.
W. Werns, 1840.
Le. Lefebvre, 1842.

Caravan Routes.

Sa. Sapeto, 1831.
Hn. Hamilton, 1834.
M. Munzinger, 1855-61-75.
C. Courval, 1837.
Hg. Heuglin, 1857-61-62-64-76.
Be. Beumann, 1890-93.
Hl. Hansal, 1901.

Telegraph Lines.

Bk. Baker, 1861.
St. Steudner, 1861-63.
E. Ernst de Cobourg, 1862.
L. Lejean, 1864.
K. Krockow, 1865.
S. Schweinfurth, 1865-68.
Ha. Halévy, 1868.

Re. Reil, 1868.
R. Rokeby, 1870-71.
P. Prout, 1872.
H. Hildebrandt, 1872.
J. Junker, 1876.
Mi. Mitchell, 1877.
Mll. Müller, 1880.

120 Miles.

of Abyssinia and the banks of the Nile belonging to Egypt makes it a natural battlefield for the sovereigns of these two countries. For more than half a century the Egyptians have occupied the intermediary zone, and in spite of their disastrous conflicts with the Abyssinians, they appeared to have definitely conquered the Sudan. But a formidable revolt, brought on by their exactions, has left them only a few places in the country recently annexed to their vast domains, and they have now been supplanted by the English on the coast. By the construction of routes and railways the whole country will doubtless soon be restored to civilisation. In virtue of the official proclamations addressed to all the inhabitants of the country by the late General Gordon "in the name of the most high Khedive and the all-

powerful Britannia, Sudan is henceforth to enjoy full independence, and regulate its own affairs, without the undue interference of any foreign Government."

At present the Mussulman states in this region of Sudan are entirely destitute of strategical routes, although at first sight the country seems to be completely open to the Abyssinians occupying the plateaux. They could easily descend by their riverain valleys, but as they cannot long breathe a mephitic atmosphere, the climate of the lowlands is a far more formidable enemy to them than the natives; such conquests as they do effect are transitory, and by the very force of circumstances are again soon lost. On the other hand, if they are prevented by nature itself from seizing these lowlands, they would still be a great obstacle to invaders of Upper Nubia wishing to penetrate along the route over the fertile slopes to Massawah and the countries of the Mensas and Bogos. The Egyptians learnt to their cost the dangers of venturing on this route, exposed, as they were, to the attacks on their flanks from the Abyssinian warriors. Farther north, from Suakin to the Nile, the water in the wells is barely sufficient for the nomad tribes, and owing to this cause the operations of the British troops in this region were greatly impeded during the campaigns of 1884 and 1885. Pending the opening of the railway from Suakin to Berber begun in 1885, the plains of the Blue Nile and Atbara can be reached only by the three traditional northern routes—that which follows the Nile from cataract to cataract; and those avoiding the great curves of the Nile by running across the desert of Bayuda, between Debbeh and Khartum on the west; and through the Nubian wilderness between Korosko and Abu-Hamed on the east. These three routes were closed to the Egyptians by the late Mussulman insurrection, and re-opened by the English under General Wolseley in 1884-5.

THE GUMU, BERTA, AND LEGA MOUNTAINS.

Beyond the Abyssinian plateaux the East Sudanese provinces have also their isolated mountain masses, forming veritable archipelagos in the midst of the plain. Many of these lofty hills which are delineated on the maps as forming part of the orographic system of Abyssinia, are, in reality, separated from it by plains. Such are the Gumu Mountains, commanding to the east the valley in which the Abai, or Blue Nile, in its upper course completes its semicircular bend before reaching the plain. A few escarpments close to the river form, together with the projecting promontories of the opposite watershed, the last gorge of the Abyssinian Nile. Farther up the river, and near its confluence with the Jabus, stands an isolated rock, the Abu-Danab of the Arabs, the Tulu-Soghida of the Gallas, which is the "Mountain of Salt," whose abundant resources have not yet been analysed by Europeans. Beyond this point to the south-west the Tumat and Jabus, two large affluents of the Blue Nile, skirt the eastern base of other mountains or of an ancient plateau, which running waters have completely furrowed in every direction. These are the Berta Mountains, famous for their gold washings, which determined the Egyptian invasion.

The Berta Mountains, followed by those of the Lega, whose highest *tulu* or summits exceed 10,000 feet, although their mean height is said to be scarcely 5,000 feet, stretch southwards towards the sources of the Sobat affluents, rejoining the Kaffa plateau by intermediary ranges which have not yet been explored by European travellers. But to the north the heights gradually lessen; the intermediary plains broaden out and unite, and the ranges are merely indicated by isolated rocks cropping out above the lowlands in continually decreasing numbers. West of the Fazogl country one of these isolated heights, the lofty Jebel-Tabi, partly covered with forests, attains a height of over 4,330 feet. Still farther on the red granite cone of Jebel-Guleh, that is to say, "Mount of Woods," or "Mount of Ghouls," according to Marno, which the Funj designate as the cradle of their race, attains a height of 2,820 feet. Still more to the west is a chain of rocks in the midst of the steppes which border the right bank of the White Nile. The highest is that of Defafang, which was till recently an ethnical limit between the country of the Denka Negroes and that of the Abu-Rof Arabs. The two riverain zones of the White and Blue Nile, on each side of the Mesopotamia of Senaar, are extremely fertile, thanks to the rainfall and the alluvia brought down by these rivers. But the intermediary region, which forms the base of the scattered rocks, presents in many places the appearance of a steppe. The land is covered with tall grasses, from the midst of which spring mimosas with their slight and delicate foliage. The populations, sedentary on the river bank, are nearly all nomad in the grassy plains surrounding the mountains of the peninsula.

East of the lower valley of the Blue Nile the plains are analogous in character. Wooded and fertile along the river banks, they become bleak and barren away from the watercourses. In the level region of Gedaref, between the Rahad and the Atbara, trees are rarely seen. The most remarkable of the isolated masses scattered amongst the steppes east of the Blue Nile is that of Abu-Ramleh, or "Father of the Sands," scarcely 1,660 feet high, but flanked by superb towers piled up in enormous masses. From the interstices of these rocks spring baobabs, their branches waving over the abyss, whilst here and there some hut, to which distance gives the appearance of a bee-hive, nestles between the cliffs at the base of the gigantic tower. In the northern steppe, Jebel-Arang, the most advanced mountain, which attains an absolute height of but 2,000 feet not far from the right bank of the lower Rahad, is mainly covered by forests containing baobabs, which here reach their northern limit. On the eastern side the Jebel-Arang is followed by the Jebel-Abash; then to the south the plain is studded with other heights, solitary or grouped, some of granite but nearly all of volcanic origin; some are even topped by basalt columns affecting the divers forms of peristyles, pyres, or diverging facets. These heights in the midst of the steppes receive considerably more rain than the plains, and the water running rapidly over the slopes is absorbed by the sand and gravel surrounding the rocky escarpment. In order to obtain water during the dry season, the natives pierce the earth at the mouth of the ravines, and the pools thus formed, usually surrounded by trees, are named *kharif* from the rainy season which fills them. In the dried-up river beds the crocodiles

and certain species of fish, notably the siluroïd *sinodontus*, lie torpid till reanimated by the returning waters of the rainy season.

The water-parting between the Nile basin and the slope of the Red Sea consists of irregular cliffs of various heights, but none lower than 3,300 feet. Primitive rocks and volcanic formations alternate in this mountainous region, which in many places presents the appearance of a plateau scored with ravines. At the mouth of the valleys sloping from the Abyssinian uplands, notably on the northern declivity of the Nakfa Mountains, are seen piles of débris, which Heuglin felt inclined to regard as the moraines of ancient glaciers, similar to those found by Fraas in the peninsula of Sinai. The granite rocks on both sides of the Red Sea, their slopes completely barren of vegetation and glittering with the many colours of their crystalline strata, resemble each other by their bold outlines and brilliant colours. One of the finest on the western side is the isolated Mount Shaba, rising above the marshy depression in which the waters of the Barka run dry. The vast peninsula of alluvial lands which at this point projects into the Red Sea basin shows that the river was formerly much more abundant than it is now.

CLIMATE, FLORA, FAUNA.

The climate of Upper Nubia occupies a middle position between the humid zone of the equatorial lands and that of the slight rainfall where the Nubian desert begins. Still there is no part of the country which does not possess a rainy season, more or less abundant. At Khartum, situated about the middle of Upper Nubia, the kharif occasionally commences in May, more frequently in June or July, terminating in September. Rain is brought down by the easterly or south-easterly winds—that is to say, the southern trade winds of the Indian Ocean; but after the rains the dry north winds return, lasting till March, the period of the equinox. During this season the temperature occasionally falls to 50° F., and at this time of the year the mornings and evenings are so cold as to require warm clothing; the daily oscillations of temperature average 60° F. During the kharif it is dangerous to remain on the frequently flooded river banks on account of the prevalent marsh fevers, and numerous tribes then withdraw to the upland regions of the interior. The black and the white ibis, very common in the valley of the Blue Nile during the season, also disappear before the rains, “for fear of the malaria,” as the natives say.

Upper Nubia is naturally divided into an agricultural and a grazing country, according to the abundance of the rains and running waters, the nature and elevation of the land. In the Fazogl country and on the banks of the Upper Jabus the arborescent vegetation is almost as leafy as in the verdant valleys surrounding the great lakes. Beyond the forest zone, which encircles the Abyssinian plateaux throughout most of their extent and which is continued along the river banks, the mouths of the valleys and the hills are pre-eminently adapted for agriculture. Thanks to their fertile alluvia and splendid climate, these lands may one day become one of the richest cotton and tobacco producing countries in the world. The steppe,



PRIMEVAL FOREST AT FAZOUL.

or *khalah*, in which the waters are lost, could hardly be utilised except as a pasture-land. But there are many extensive tracts covered with baobabs, dum palmas, tamarinds, and mimosas, whence a gum is obtained known as tale, far inferior to the gums of Kordofan. In Senaar, as in Kordofan and For, on the borders of the regions where water is scarce, the hollow baobab trunks, some of which are 86 feet in circumference, are frequently utilised as natural cisterns. They are filled with water during the rainy season, some of the trunks containing a reserve of some 2,800 to 3,000 cubic feet of water; the natives climb up and draw off the precious liquid from the tree by means of waterskins. In the northern part of Sudan some of the plains are veritable deserts, the sandhills undulating all around, wearing away the base of the rocks. On the route from Berber to Suakin, Abu-Odfa, an isolated granite block, has thus been eaten away all round its base, and sooner or later the heavy rock will snap its slender pedestal and fall on the sand. All the cliffs and rocky slopes of this desert region of Upper Nubia are uniformly covered with a kind of blackish varnish, whose origin is unknown. These gloomy walls impart an aspect to the landscape more forbidding and solemn than that of other regions whose mountains are higher and escarpments more abrupt.

The forests of the advanced chains, as well as the tall grass of the prairies, in certain spots rising to from 13 to 16 feet after the rainy season, are inhabited by monkeys, lions, leopards, buffaloes, giraffes, rhinoceroses, and elephants. Mostly nomads, the huge pachyderms from one season to another roam over regions of many hundreds of miles in extent. Like the Somali Gadibursi on the other side of the Abyssinian Mountains, the hunters of the Hamran tribes, in Taka, attack these enormous animals in the boldest manner. Mounted on swift horses they fly before the elephant; then, suddenly wheeling round, they spring to the ground behind the animal and hamstring it. The huge beast falls on the ground, and the hunter awaits an opportunity to give the second and usually mortal blow. Since 1859, Taka and the conterminous provinces have been regularly visited by hunters, mainly Italians and Germans, not only for the sake of the ivory, consisting usually of tusks much smaller than those of the Central African elephants, but also to capture wild animals for the European menageries. One of these hunters recently brought to the port of Hamburg thirty-three giraffes, ten elephants, eight rhinoceroses, four lions, and several other animals of less value. At the time of the long siege which the Egyptian garrison had to sustain in Kassala, during the years 1884-85, their provisions were drawn largely from parks of wild animals. The Bejas and Abyssinians also hunt the large animals on the borderlands of their respective territories, but when they meet they turn from the pursuit of the quarry and attack each other as hereditary enemies. The poisonous doboan, or *surrêta* fly, swarms in the valley of the Mareb. Its bite, although it does not affect the wild fauna, kills camels, donkeys, oxen, and other domestic animals in a few weeks. Hunting is therefore a dangerous pursuit in these infested regions, where the men have to penetrate on foot into the gorges or high grass. The origin of this fly is unknown; it may be either the Central African *tsétsé* or the *tzatzalia*, which Bruce

speaks of as "the most dreaded of all animals," or it may be that insect which the ancients declared could put the lion to flight. East of the Blue Nile, in the Kuba country, another species of fly, smaller than the doboan, is fatal only to the ass, horse, dog, and camel. But the cause of the mortality of these animals may possibly be due, not so much to the sting of one single insect, as to the thousands of wounds inflicted daily by the swarms of gadflies which absolutely worry the animals to death. The live stock can be protected only by keeping them in the stables during the day, and letting them out at night, or else by burning pungent herbs. However, there are spots where these pests cannot enter, consequently the agricultural populations have there collected into compact groups, such as the Abu-Ramleh uplands south-east of Roserès, which is a region of this description.

INHABITANTS.—THE SHANGALLAS AND LEGAS.

The contrast between the Abyssinian mountains and the hilly plains sloping towards the Nile consists not only in the relief, climate and agricultural produce, but also in the populations. The tribes, dialects, manners, and religions, all differ, and are bounded by an irregular zone, which encircles the side of the mountains. In many places, these regions are separated by tracts either deserted, or else peopled by savage tribes, always on the watch for prey. All these communities are known by the collective name of Shangallas, which, however, is of no definite ethnological value, as all the non-Arab or non-Abyssinian blacks are indifferently called Shangallas by the people of the plateaux.

The Upper Jabus Valley and the mountains commanded by the double peak of Tulu-Wallel (10,666 feet), whose southern face overlooks the Sobat basin, are peopled by the Legas, the most westerly of all the Galla peoples, unless the Latukas and Wa-Humas may also be considered as belonging to the same race, from which they are now separated by so many different nations. The type of the Legas is very pure and quite distinct from that of the Negroes, although they are surrounded by the latter on the south, west, and north. Their complexion is very light, even more so than that of Europeans bronzed by the tropical sun. Tall and usually thin, they have the "arms and legs of Yankees," a long and thin neck, narrow hollow-cheeked face, but with strong features and expressive eyes, a small head, and a high, narrow, and conic forehead. The women are in proportion much shorter than the men, and also present a much greater contrast than is usually remarked between the sexes, being as plump as the latter are thin and scraggy, whilst their hands and feet are extremely small. The royal family, and those of the Lega chiefs, are of far less pure extraction than the bulk of the nation. They have received a strain of Negro blood; but although the complexion is darker, the features are usually finer, and the body more fleshy. These mulattos are also of a livelier disposition, and have not the melancholy appearance of the other Legas, who are usually seen leaning on their lances with the head resting pensively on the right shoulder; from this circumstance Schuwer compared them to cranes. The Legas are one of the most numerous nations of the plateaux, comprising at least a hundred thousand

persons. Although their king can put twenty thousand warriors on the battlefield, without counting the Negro troops of his vassals, he never abuses his power to make conquests. A kind and peaceful people, the Legas allow the women great liberty, and permit their slaves to work in their own way. They themselves are laborious and enthusiastic agriculturists; they till the red soil of their fertile valleys, and in the evening sit before their huts smoking narghilehs, whose globe consists of a

Fig. 73.—THE LEGA COUNTRY.

Scale 1: 150,000.



pumpkin, or else chewing coffee berries, roasted with salt, butter, and onions. They pay no taxes to the king, but the tribes alternately cultivate and reap the fields set apart for the support of the royal family. The king decides upon the fines, when his subjects do not prefer to settle their disputes by the law of retaliation. The nation also recognises a high priest, who celebrates the sacred mysteries in a *kinissa*, a local name apparently derived from the term "kilissa," or church, used by the Christian populations of the eastern plateaux. The sacrificer, on killing an animal, always bathes his forehead in the blood, and allows it to dry on his cheeks in blackish clots. But their ancient religion seems to be on the decline, and the

zealous Mohammedan missionaries are making such great progress that in a few years all the Legas will probably have embraced Islam. In the midst of the Legas live a few thousand Denkas, who have sought protection amongst them and work as their slaves. Having no other means of escaping the slave-dealers in the wasted plains of the Sobat and Zal, which they formerly inhabited, they have been obliged to seek refuge in the mountains, offering themselves to the tribes as porters and mercenaries. These Denkas are distinguished from the other tribes by two or three horizontal marks, which they have made on the forehead by means of stalks of cereal plants, bound tightly round the head for several weeks. They do not marry the women of the country, and hence are obliged to practise polyandry, which has become an institution regulated by ceremonies. The capital of the Lega country is the town of *Gumbali*, situated at a height of 6,600 feet on one of the upper affluents of the Jabus. *Gobo*, the residence of their high priest, lies farther south at an elevation of 7,530 feet.

THE BERTAS.

The advanced chains west of the Damot Mountains are occupied by numerous Shangalla peoples; but the most powerful nation is that inhabiting the two valleys of the Jabus and Tumat, tributaries of the Blue Nile, and the parting ranges between the two watersheds of the Bahr-el-Azraq and Bahr-el-Abiad. These Bertas, of Negro stock, who are said to number about 80,000, and whom the Arabs usually term Jebalaîn, or "mountaineers," a name also applied to other peoples, have kinky hair, pouting lips, and the face flat, although less so than that of their West African congeners. However, the figure is well-proportioned, the limbs supple and strong; and the Berta warrior, armed with lance and shield, presents a commanding appearance. The women adorn the face by passing a silver or copper ring through the nostrils, and an iron one through the upper lobe of the left ear. The young men fasten the tusks of boars to their temples or necks, and on grand occasions both men and women paint the body red, like the Bâri warriors. The women of some tribes tattoo the face in such a fashion as to produce numerous little pustules like those of small-pox. The warriors of other tribes expose the epidermis so as to produce very elegant arabesque designs; but their customs allow those warriors alone who have cut off one or more heads to tattoo themselves in this way. The Bertas, like all the other Negro peoples of the Blue Nile, consist exclusively of agriculturists, which is the principal cause of their contrast with the Negroes of the White Nile, who are all cattle-breeders. The language of the Bertas belongs to the same family as that of the Shiluks, Nûers, and Denkas; but since their country has been brought within the Mohammedan circle of attraction, first by the Egyptian conquest and then by the general development of the Nilotic populations, Arabic has become the cultivated language. The villages are administered, and the chief of the tribe chosen, by the Arabs. In each independent village resides an Arab merchant acting as a consul for the protection of his fellow-countrymen, and thanks to him the stranger is received

like a brother. A sheep or goat is killed and the blood received in a calabash, in which all the assistants dip their hands and then embrace. Henceforth the stranger is safe from all attack. The Bertas are great orators, and often hold councils, where each one addresses the assembly in turn, seconded by an applauder, who stands at his side. But he is never interrupted, as, more polite than the Westerns, the Bertas always await the end of a speech before replying to the argument. Excepting the northern districts, where all natives claim to be Mohammedans, the religion of the Bertas is still mainly Animistic. At the period of the new moon they dance by the light of the stars, and terminate these feasts with orgies. Their amulets consist of certain roots, flowers, and the scarabeus, a species of beetle, probably the *ateuchus Ægyptorum*. Thus Egyptian influence, after more than two thousand years, still survives amongst these obscure peoples of the Upper Nile basin. Like the Buruns and other tribes assimilated to the Arabs, they have also the *turambish*, a curved wooden "knuckle-duster," very similar in shape to the boomerang. According to some authors they do not throw this weapon, like the Australians, but carry it in the hand, using it when scaling the mountains to hook on to the branches of the trees or projections in the rock. But the explorer Marno, who has traversed these countries, states that he has seen the natives use as a throwing-stick both the *turambish* and the *culdeba*, a still more formidable iron weapon, curved in the form of a sickle. Schuver confirms this statement, but says that the Bertas cannot make the weapon return to the exact point whence it was thrown.

There are no towns properly so-called in the Berta country; but their most important village is *Kirin*, situated on the western slope of the mountains in a basin of the Yavash or Yal, and consisting of large huts scattered among enormous granite blocks. No other national assembly presents a more picturesque appearance than that of *Kirin*—each rock has its own group of men in the most varied attitudes, upright, lying down, sitting, or holding on to the crags. Many of the Berta tribes have chiefs, who bear the title of king or *mek*, but their power is very precarious. Directly the *mek* no longer pleases his subjects, the men and women all collect together and tell him that they hate him, and that it is time for him to die; then they hang him to the nearest tree. If the king is prevented by sickness from holding his daily court of justice, his influence becomes ill-omened instead of being favourable, and the gallows rids the people of him. A wife when unfaithful is always punished with death.

To the north and north-west of the Bertas, the "no-man's-land" which separates the Blue Nile from the Abyssinian plateaux of Agaumedar, is occupied by numerous tribes of divers origin, and here are spoken five distinct languages, without including Arabic and Abyssinian. A sheikh residing at *Kuba* or *Monkuis*, a village perched on a mountain, is apparently a sovereign; but the people of *Kuba*, the *Gumus*, the *Šienetjos*, the *Kadalos*, and the Berta immigrants, govern themselves and are frequently at war with each other. Some of the *Gumus* live in small independent or isolated groups, a space of a mile intervening between the dwelling of each family. On grand occasions they all carry parasols of honour of

the form and size of umbrellas. In their eyes this emblem is the proof of the degree of civilisation that they have attained. The Kadalos, whose villages are built on impregnable rocks, ornamented with tufts of foliage in honour of the genius of the winds, boast that they are the true aborigines. According to Schuwer, they resemble

Fig. 74.—INHABITANTS OF THE BLUE NILE.

Scale 1 : 4,900,000.



the Negroes of the White Nile much more than the Gumus and Bertas; they have large eyes, which distinguishes them more especially from the Gumus, whose eyes are small, "like those of pigs."

The Sienetjos, who pass for the remnant of a people formerly in possession of the country, and were almost entirely exterminated by the Negroes, are probably akin to other Sienetjos who live farther east amongst the populations of Damot and Gojam. The Sienetjos are not blacks, having a yellow skin, perceptibly clearer than that of Europeans who are exposed to climatic influences. The face is nearly

square, the forehead very broad, and the skull regular. Very careful of the purity of their race, they never allow their daughters to intermarry with the Arabs or Negroes. Having good reasons to fear strangers, they live on inaccessible rocks, natural fortresses which the women scale daily, so as to provision the village; but the path is carefully forbidden to people of other tribes. The Sienetjos are the only weavers and smiths of the country, and it is due to this fact that they have hitherto managed to preserve their existence in the midst of so many enemies. They are also skilful jewellers, making extremely elegant copper ornaments, which they do not sell. These trinkets are reserved by them for their own women, who are very fond of finery, and who wear several rows of glass bead necklaces round their necks.

East of the Gumus, the plains covered with low hills which stretch towards the offshoots of Damot and Agaumedar, are beginning to be peopled by Agau immigrants, who, arriving in the country in isolated families, settle down in the clearings, at a few miles distance from each other. They do not fear the hostility of the natives, as they know they are protected by the prestige of the great military Empire of Abyssinia, by which any wrong done to them would soon be revenged by a war of extermination. Thus, the boundaries of Abyssinia are being yearly enlarged by the immigration of new colonies; from an independent nation, the Gumus have almost changed into a tributary people. The Ginjar, who occupy the region of the Abyssinian spurs farther north as far as the frontiers of Galabat, have to pay tribute, often even in slaves. They are blacks mixed with Arabs and Bejas, probably refugees in their territory. They call themselves Mohammedans, and speak a corrupt form of Arabic. All their pride is centered in their hair, which is plaited like that of the Abyssinians, and greased with butter.

THE FUNJ RACE.

The mountains of the region between the two Niles are peopled by more or less mixed branches of the ancient Funj, or Fung, nation, which formerly ruled over all the country of Senaar. The Funj nearly all laid aside their national language on their conversion to Islam; still some tribes have special dialects, greatly intermixed with Arabic words, and said to be connected with the group of Nuba languages. Mohammedanism has not yet completely supplanted the ancient religion. On the Jebel-Guleh, which the Funj consider as their sacred mountain, the explorer Pruyssenaere has seen them still celebrate phallic rites around a clay altar on which stands a wooden statue representing a god. According to Beltrame, their conversion to Islam is so very superficial that the majority of them have not even been circumcised. Hartmann, taking up the hypothesis of Bruce, believes that the Funj are allied to the Shilluks, and that all the region comprised between their territory and that of the Bertas is peopled by tribes of the same stock. The Hammej, who are now greatly mixed with the Arabs; the Burun, who are still cannibals, according to Marno; and the haughty Ingassana, who occupy the valleys of Mount Tabi, and have valiantly repulsed the assaults of the "Turks," are all

said to belong to the Funj race. This very name, equivalent in meaning to "citizen," would indicate that the Funj consider themselves as civilised in a superlative degree, in comparison with their still barbarous kindred. However this may be, the Funj were till recently one of the most powerful African peoples. At the commencement of the sixteenth century they destroyed the kingdom of Aloa, whose centre stood near the confluence of the two Niles, and founded another State, that of Senaar, which existed till the beginning of this century, exercising control over all the neighbouring peoples of Sudan, Nubia, and even Kordofan, and holding in check the Abyssinian armies which occasionally attempted to descend from their plateaux. But the Arab viziers by degrees obtained the power, leaving an empty show of authority to the Funj sovereigns; rivalries and revolutions disorganised the State, and when the troops of Mohammed Ali penetrated into Senaar in 1821, they had an easy triumph, thanks to their discipline and superior weapons. The conquest was not to the advantage of the Funj, who soon became subjected to methodical slave-hunts, fusillades, the punishment of impaling, and other "benefits" of civilisation introduced by the Egyptians.

At present the Funj, specially classed under this name, are not numerous, and even round Mount Guleh very few are met with who can be considered as typical representatives of the race; the numerous crossings caused by war and slavery have so corrupted the population that it is a matter of great difficulty to trace the predominating elements. Every Arab or semi-Arab tribe, especially the Baggâra immigrants and the industrious Barbarins, come to seek a fortune in this country, and the Kordofan Nubas settled in military colonies around the towns, have all contributed to modify the Senaar populations. The Egyptians alone, whether Mussulman soldiers or Coptic scribes, have had but little influence on the race, nearly all having quickly succumbed to the climate. The variety of their origin and physical appearance is so great that the inhabitants of Senaar are usually classed according to their colour as "white, red, yellow, blue, green, and black." Nevertheless the fundamental ethnical element appears to be that of the Funj. According to most authors they form an intermediate type between those of the Nubians, Negroes, and Gallas. The head is long, the face orthognathous, the features regular, the cheek-bones slightly prominent, the body slim and graceful, and like most other natives they spend much time in arranging their hair. They are affable, cheerful, and hospitable, and all the Senaar Egyptians prefer to dwell in Jebel-Guleh, in the Funj country, than in any other district. Infirm persons are almost unknown amongst the Funj, and their women retain their beauty and bodily elegance far beyond the period usually allotted to the women of other African tribes. The *delka*, which consists of rubbing the body, fumigating it with perfumes, and anointing it with grease, is a practice much in use amongst the Funj and the other civilised inhabitants of Upper Nubia. The people of Senaar are skilful surgeons, and many of them travel to the basin of the Nile in the exercise of their talents. They are known even in Egypt, and the fellahin give the name of Senaari to the persons who vaccinate, treat fractured limbs, or operate on those suffering from ophthalmic complaints.

THE TAKRURI.

To the north and north-west of the Ginjar, the zone of the spurs which separate the Abyssinian plateaux from the Nubian steppes is occupied by other immigrants, collectively known as Takruri, or Takarir, originally come from Dar-Fôr, Wadai, and the countries of Western Africa. Mostly pilgrims returned from Mecca, they have preferred to stop and settle down in a country where they found lands to cultivate and a relative independence, rather than return to their own territory, where they were certain to meet with oppression. Perfectly acclimatised to these lowlands, where most of the Abyssinians and European travellers succumb, they now occupy all Galâbat and many of the valleys of the Kwarra, in Abyssinia. Having become free, they have, at the same time, acquired great prosperity as farmers and merchants; but they have not always peacefully enjoyed their conquests, and civil war often broke out between the Takrur of Wadai, those of Dar-Fôr, and the descendants of the immigrants long settled in the country. A large number of Jiberti Mussulmans, expelled from Abyssinia because they have refused to abjure their faith, have recently increased the population of the Takarir communities and of the Dabaina Arabs.

THE KUNAMA AND BAREA.

The Kunama, Bazen, or Baza, who people the valleys of the Mareb and Takkazeh and the intermediary plateaux at the mouth of the Abyssinian kwallas to the number of some one hundred and fifty thousand, are "Shangallas," who have successfully kept aloof from intermingling with the Arabs. They do not as yet speak the language of the northern invaders, and, except in the vicinity of the borderlands, have not adopted the Mohammedan religion; but if they have succeeded in maintaining their national independence, it is only due to their continual and pitiless wars. An implacable struggle exists between them and the nomads of the north, and the frontier populations are always on the alert to avoid surprise, and the massacre which would inevitably follow. The Kunama have also to defend themselves on the south from the attacks of the Abyssinian highlanders. Like their neighbours, the Barea, ten times less numerous, who live to the north-west in the rocky region of the water-parting between the Mareb and the Barka, they are continually in danger of being crushed by the enemies who harass them on both sides. In one direction the Arabs assail them from the lowlands, on the other the Abyssinians swoop down from their plateaux, whence Munzinger compares them to the corn, ground between two millstones. Nevertheless, these populations so threatened are amongst the most interesting by their customs, the most sympathetic by their qualities, and the most worthy of imitation; peace exists between their different communities, and labour is respected by them.

Although resembling each other in their political and social institutions, the Kunama and the Barea are different in origin and physical type. The Kunama, established in the country since time immemorial, claim to be immigrants of Abys-

sinian origin, and the Abyssinians themselves look upon them as descendants of the ancient Aksumites. They are generally of a dark complexion, and individuals are often found amongst them nearly as black as the Nigritians of western Africa. Well-proportioned, tall, strong, and broad-shouldered, the Kunama are one of the healthiest and most vigorous peoples of the continent. Sickly persons are unknown, and the disgraceful diseases so common amongst the Abyssinian highlanders and the Arab lowlanders have not yet contaminated their race. Like the Nuers and Denkas of the Upper Nile, they often rest standing on one foot. They rarely suffer from the fevers so dangerous to strangers, and many of them attain an advanced age. However, they have a certain tendency to stoutness, and in this respect present a singular contrast to their neighbours, the Barea, and especially to the Arabs. The Kunama attribute their good health to the scars with which they cover the face and body—and which they look upon as signs of beauty—as well as a sacred writing proclaiming their origin. The Barea are not of such light complexion as the Kunama, and are usually weaker and less shapely; many blind persons are found in their tribes, especially in the vicinity of the marshy shallows of the river Barka. Whilst nearly all the Kunama have a family likeness, the Barea present a great diversity of types, and, excepting the women, have rarely regular features. The languages of the two peoples are also different, although both may be classed provisionally in the “Hamitic” group, while in some respects they appear to be allied with the Nuba idiom. It will be possible to fix their position definitely when all the dialects of North-East Africa have been as carefully studied as the *Bazena* of the Kunama, and the *Nerebena* of the Barea, have been by Munzinger, Edlund, Halévy, and Reinisch. The speech of the Kunama is unaccentuated, and without harsh consonants; uniform and soft, it corresponds perfectly with the peaceful character of the nation. Very few of the Kunama speak any language than their own, whilst nearly all the Barea understand the Tigré of their Abyssinian neighbours. There is a rich treasure in the popular songs and melodies of the Kunama, which have not yet been collected by European explorers.

The Kunama and Barea are pre-eminently agriculturists, all cultivating the land without distinction of sex, position, or fortune. During the rainy season the plough never rests, and, unlike their neighbours, they have no idle days consecrated to religious feasts. All the domestic animals are used for work; the camels, asses, and horned cattle are harnessed to the plough, and if these cannot be had, the men or women take their place. Everyone has his farm, and plots of land are set apart even for the slaves, who are allowed sufficient time for its cultivation. The public domain, at the disposition of all, is of sufficient size to enable the labourer to select another piece of land, and thus, replace the field exhausted by a long term of cultivation; but the rotation of these allotments is usually made in a regular order around the scattered huts in which the families reside. Wherever the hills have a decided slope, they are cultivated in terraces sustained by stone walls. The Bazen are never daunted by any kind of work. Peaceful labourers engaged exclusively in tilling the land, neither the Bazen nor the Barea are grouped in villages, as they

have no need to defend themselves, except in the immediate vicinity of the Abyssinians or Arabs. But there they often take the offensive. Collecting together in small bands, they set off to plunder distant villages, disappearing before time has been given to signal their attack, and enable the neighbouring tribes to pursue or cut off their retreat. The Abyssinians and Bejas speak of the Bazen and Barea with terror, and usually depict them as tribes of brigands. This reputation has been earned for them by the tactics these agricultural peoples have adopted; they attack in order to protect themselves more effectually. Nevertheless, it appears positive that certain Barea mountaineers have very cruel customs. In some districts a young man cannot honourably marry until he has cut off a man's or woman's head in combat or by surprise.

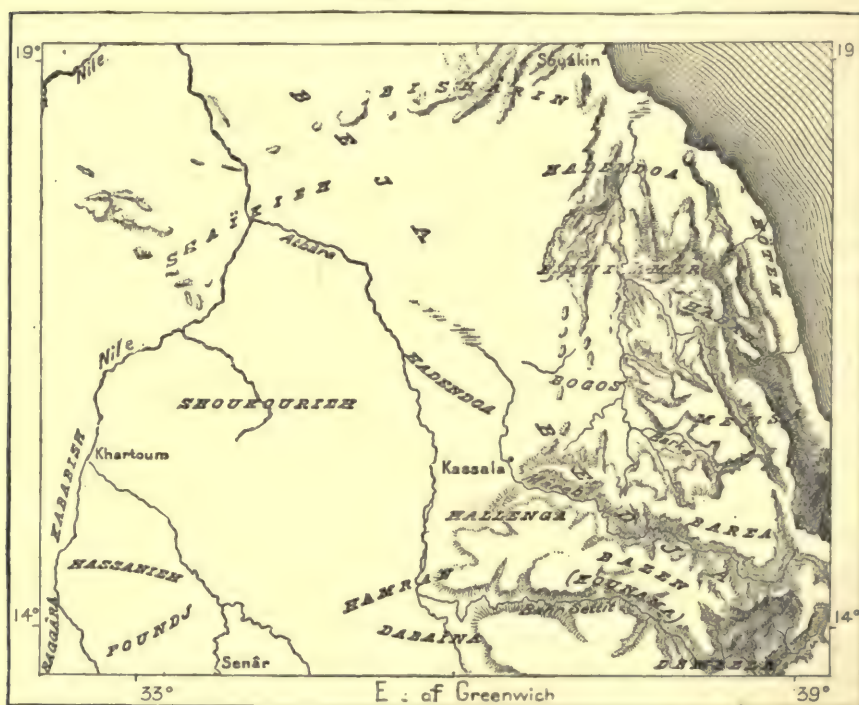
Although so much dreaded by their neighbours, the two peoples have nevertheless no organised government; they are divided into as many independent groups as the country offers natural divisions. Their astonishing power of resistance, which has been their safeguard for so many centuries, comes from their spirit of solidarity; the various communes all look upon each other as brothers, but without ever recognising superiors. Amongst the Bazen especially, who have been less encroached upon than the Bareas by the interference of strangers, the sentiment of equality is a prevailing feature; in this respect they are perhaps not equalled by any other people in the world. The name of Barea, which the Abyssinians have given to the two groups of the Néré and Mogoreb, originally signified "slaves," yet this contemptuous name has been quietly and even haughtily accepted by them. The Bazen and Barea consider themselves as "servants" of the community, no one amongst them aspiring to the title of "master." In the communes no one exercises the functions of a chief. The legislative and executive power belong equally to the assembly of the inhabitants, whatever their origin may be. From the moment a stranger settles amongst them he becomes the equal of the natives. The old men are listened to with the greatest respect, and their advice is that which is generally followed. Violent outbursts of anger, unmannerly interruptions, and personal remarks are unknown in these communal meetings, politeness being pre-eminently the rule. They soon agree to the matters in hand, and when the decision has been arrived at it is immediately put into force. In the eyes of the commune a family has no other rights than those of the persons who compose it. They have no process to sustain or feuds to avenge, every debate being at once referred to the decision of the elders of the tribe. Marriage is not a family feast, but a common ceremony, in which everyone takes part. Equality is the rule in the household as well as in the commune, although in certain districts the bride lies down at the threshold of the hut, and the bridegroom steps over her, slightly touching her cheek with his foot, as a sign that she must henceforth be prepared to submit to any hardships. The morals of the Bazens are pure, but the public opinion is not severe. Children born out of wedlock are received into the tribes with the same rejoicings as legitimate infants, and like them inherit from their maternal uncle. The reason of this is that in this country the matriarchal government prevails, which sets aside the real or putative father in favour of the uncle, who is the undoubted representative

of the lineage. In the commune of the Kunamas there are very few acts which call down a general punishment; a thief even escapes censure, being simply compelled to restore what he has taken, just as if it had been borrowed. The only punishment imposed by the community is exile. This sentence is carried out by young men who mount on the roof of the criminal's hut and scatter the thatch to the winds. This is the signal for the exile to depart, and he never can return to his native place.

Munzinger has vainly sought in the Kunama country for traces of Christianity, such as those found to the east amongst the Bogos, and westwards in Senaar.

Fig. 75.—INHABITANTS OF TAKA AND NEIGHBOURING DISTRICTS.

Scale 1 : 7,500,000.



There are seen no ruined churches, and the current religious ideas show no traces of the influence of the Christian or Jewish dogmas. The religion of the Kunama consists in a belief in the evil eye, fear of sorcerers, wearing of amulets, veneration of the *alfai*, or "makers of rain," respect for old men, and especially the blind. They likewise have a great veneration for the dead, and bury them carefully, which seems to imply a belief in immortality. Nevertheless, a slow religious propaganda has already made considerable progress amongst the Bazen and Barea republics. Half of the Barea already call themselves Mohammedans, although they hardly follow out the precepts of the Koran. On the other hand, on the Abyssinian frontier a number of Bazen are reputed to belong to the Christian Church.

Notwithstanding the efforts of the nation to avoid traders and foreigners, who are only allowed to penetrate into the country under the personal responsibility of a citizen, their customs are becoming modified, and they are on the eve of great social and political changes. The skin aprons are already being replaced by the Abyssinian toga and the Arabian shirt. Slavery even has been introduced into the Bazen country, although under a very mild form. If the slave either marries or runs away he becomes free by right. Undoubtedly the communities of the Mareb and of the Takkazeh will soon have lost the independence of which they are justly so jealous, and a new destiny will then commence for them. Their initiation will doubtless be a hard one, and these populations, who were till recently the happiest in Africa, will have to traverse a sea of blood before they can unite with their neighbours, and thus constitute a great nation. The descriptions that James and other hunters give of the Kunama already differ greatly from those of Munzinger; but far from civilising them, their neighbours have so far rendered these tribes more savage.

THE HOTEH, ZABALAT, AND JALIN TRIBES.

Side by side with the Bazen, and other "Shangallas," live other peoples possibly of kindred origin, although even those whose physical type shows unmistakable signs of the predominance of Negro blood call themselves Wold-el-Arab, or "Sons of Arabs." If only the chiefs, the descendants of conquering families from the Arabian peninsula, succeed in preserving their genealogy and their language, the tribes, although of native origin, claim Arab descent and are frequently taken for Arabs. Besides, there are undoubtedly populations living west of the Red Sea who have come from the east, and who are known to have crossed the Red Sea within historic or recent times. Thus in the vicinity of Akiq, the Hotem Mohammedans, a tribe armed with guns, are of pure Arab blood. So recently as 1865 their numbers were largely increased by fresh immigrants from the coast of Yemen. The voyage from coast to coast presents little difficulty, and if the English vessels did not carefully watch all the ports, the relations between Arabia and the Sudan would be sufficiently frequent to rapidly modify the political equilibrium of these regions.

Amongst the true Arab tribes of the Sudan, the missionary Beltrame mentions the Zabalat pastors, the "Handful of Men," or, as they are also called, the Abu-Jerid, or "Fathers of the Palms," who live between the Dender and the Blue Nile, above Senaar. They are said to have come from Yemen before the conversion of their kinsmen to Islam, for they are not Mohammedans, and no traces of the Mussulman practices are to be found in their cult. They are fire-worshippers, as were so many South Arabian tribes before the advent of Mohammed, and as were also the Blemmyes, who, according to Procopius, were in the habit of sacrificing men to the sun. Their complexion is lighter than that of the neighbouring populations, and betrays a reddish hue; according to Lejean, they have blue eyes and light smooth hair. The gum obtained from the *sunt* acacias enters largely into their diet. They jealously preserve the purity of their race, and they claim never to have intermarried with foreign tribes. They do not tolerate slavery, because the introduction of servants

into the family circle would have the fatal result of contaminating their blood. Being an "elected" race, their chief ambition is to maintain their independence, and to live in peace. On this account their forefathers withdrew from the outer world, and they themselves seek to live isolated, protected from the marauding tribes by desert zones. They recognise the existence of one God alone, who manifests himself in the stars, the sun, and fire. When they pray they look towards the stars, or turn towards the rising or setting sun, or else light a great fire and watch the tongues of flame flashing up in the wind. Fire is to them a great purifier; on burying their dead, the head turned towards the rising sun, they light a funeral pyre on the grave, as if to draw the soul of the departed into the fiery vortex. They also believe in the existence of a supreme demon, the god of darkness, and have recourse to sacrifices in order to conjure this dangerous enemy.

The Zalabats are monogamists, but should a young girl fail to find a husband, or become a widow soon after marriage, it is the custom for her nearest relation to wed her; thus it occasionally happens that a brother becomes the husband of his own sister. The government of the tribe is entirely regulated by their customs, which are interpreted by the elders; by them also the chief is chosen, now in one family, now in another, no other obligation being imposed upon them than to choose the "best."

The Jalins or Agalins of Senaar and the Atbara Valley are also looked upon as Arabs, and in this country no one doubts their noble descent; the Arabic spoken by them is much purer than that of the other nomad tribes in Nubia. They are distinguished from all the other inhabitants of the country by their love of study, their commercial instincts, and their religious zeal, although they are not fanatics. The men and women on the banks of the Nile wear large hats of foliage to protect themselves from the sun. Many of the neighbouring populations who call themselves Arabs, without probably being so, are in many respects really assimilated to the Arabs.

THE BEJAS.

The Bejas, the Blemmyes of the ancients, perhaps the Bonkas or Bongas whose name is found on the inscriptions of Aksum, constitute one of the ethnical groups represented by the greatest number of tribes. North and south of the Bazen territory they occupy nearly all the region comprised between the Blue Nile and the northern Abyssinian advanced ranges. Still farther north the bulk of the nation, which appears to have preserved its ethnical name under the form of Bishârin, stretches far into Lower Nubia, occupying all the land comprised between the great western bend of the Nile and the Red Sea coast; besides, several Beja tribes also live west of the main stream in Kordofan and even in Dar-Fôr. The "Nubians" recently exhibited at the Jardin d'Acclimatation in Paris were nearly all Bejas from Kassala and the surrounding district. The southern peoples south of the caravan route between Berber and Suakin, have no national cohesion with the kindred tribes. Most of them are even mutually hostile to each other, and never cease their quarrels except to unite against a foreign invader. Thus the



KADI OF KHARTUM AND HADENDOA SHEIKH.



clans banded together at the time of the Turkish invasion ; but their confederation did not last long, and under the Egyptian rule the tribes have again become scattered into a multitude of communities without common concert. The Bejas, rather than the Abyssinians, are probably the "Ethiopians" of Herodotus, the civilised people who built the city of Meroë and its pyramids. In the Middle Ages the Bejas also constituted a powerful state, whose capital was Aloa, on the Blue Nile, about 12 miles above Khartum. At this period the Bejas were Christians, at least in the vicinity of the confluence. When their city was overthrown by the Funj and they returned to the steppes they also embraced the religion of the nomad pastors. All the Bejas are Mohammedans, although most of them, like the Bedouins of Syria and the Arabian peninsula, are only so in name, in spite of the ardour with which they have enrolled themselves amongst the followers of the Mahdi, under whose guidance they have regained a certain national unity.

Of all the southern Beja tribes, the most powerful is that of the Hadendoas, who roam over the Taka steppes, between the Gash and the Atbara to the west, and the Barka to the east, although in their migrating and pillaging expeditions they often pass beyond these limits. According to Munzinger, they number about one million persons. Another numerous people are the Shukurieh or Shukrieh, a nation of pastors herding their flocks between the Nile and the Atbara, and cultivating the irrigable valleys in the neighbourhood of Kassala. The Hallengas occupy the narrow zone comprised between the Atbara and the Gash, while the Hamran dwell on the plains where the Atbara effects its junction with the Bahr-Settit. Farther to the west and south-west, some Dabeïna hordes roam over the steppes watered by the Rahad. In the "Mesopotamia" of the two Niles the soil is disputed between the Abu-Rôf, or Rufah, the Jalins, and the Hassanieh, that is to say the "Cavaliers" or "Horsemen." Lastly, to the east of the Hadendoas, the circumference of the advanced plateau of Abyssinia between the Barka and the Red Sea, nearly as far as the gates of Suakin, is occupied by the Beni-Amers. According to Hartmann the Hamrans, whom he calls Homrans, that is to say the "Reds," are related to the Agau. Nevertheless, all these populations call themselves Arabs, and are generally considered as such on account of the religion they profess, their pastoral and warlike habits, and also on account of the language henceforth adopted by them. Besides, it is certain that the Arab element is strongly represented in these nomad Beja tribes, as is proved by numerous families whose type is absolutely identical with that of the Arabs of the Asiatic peninsula. According to tradition they are descended from the tribe of the Uled-Abbas, in Hejaz. In the greatest part of the Beja countries, the original dialects are giving way before the language of the Koran ; but they still survive, at least in a state of patois, in the vicinity of the Abyssinian mountains. Almqvist, who has composed a general grammar of the Beja idioms, recognises four principal dialects, without counting the jargons which the hunters love to speak, probably because they are under the influence of the superstition, so common in many countries, that certain local words have the power of fascinating animals. The original

language spoken by the Hadendoas, the Bishârin, and half of the Beni-Amers, is "Bedouin" (Bedawieh, or Bejavi), which however, in spite of its name, is not an Arabic dialect, although in many respects connected with the Semitic group of languages.

The Bejas, taken as a whole, and apart from the local varieties, are one of the African tribes most distinguished by their handsome features and elegant forms. The children are as a rule extremely pretty and vivacious, and young women are frequently met amongst them whose regular features and haughty carriage make

Fig. 76.—SHUKURIEH BEJA.



them perfect models of physical beauty. In the families of some of the Beni-Amer chiefs, who have slaves to prepare their meals, which are more choice than those of the ordinary nomads, stoutness is by no means rare. The complexion of the nobles is also much lighter than that of the people. Nearly all the Bejas are very swift runners, which they attribute to their frugal diet, consisting entirely of milk and farinaceous aliments. Their arms are very long in proportion to the rest of the body. Explorers are struck with the similarity of type between the Bejas, the Afars, the Ilm-Ormas, and even the Bantus of Southern Africa. In spite of their pretension to the title of Arabs, several of the Beja tribes have preserved the customs of the Negro populations, as regards costume and the

scarring of the body. Their warriors have not yet completely ceased wearing coats of mail, while some of the tribes still use primitive weapons, amongst others a plain or spiked stick. The bulk of the Bejas wear their hair very thick as a protection against the sun. On a level with the eyes they draw a circle round the head, above which the hair rises straight up like a huge mop, distinct tufts forming a crest at each side and at the back, which serve as a protection to the ears and the nape of the neck. A scratcher, usually a porcupine quill, is stuck through this black headdress, which is often saturated with butter.

Most of the Bejas are said in their youth to possess considerable intelligence, while their development is greatly arrested after puberty. They are said to be bounded in their ideas, obstinate, boastful, rude, disrespectful to their parents, and careless of the welfare or safety of their guests. They give themselves up exclusively to cattle-breeding, and migrate from pasturage to pasturage, although one of their *tsaga*, or encampments, may be considered as the official residence. Custom forbids that anything in this place should be touched; marauders may seize the flocks, but they respect the tents. The Hadendoas possess an excellent breed of camels, which enables them suddenly to appear at great distances from their usual camping-grounds, and escape with their booty before the warriors have had time to assemble so as to overtake them. The numerous Beja tribes also consider it a point of honour to breed war-horses, although in many places they are fain to be content with small wiry animals of Abyssinian extraction; the larger and stronger Dongola steeds suffer greatly from the climate, and the chiefs are compelled to be constantly renewing their studs. Some of the Beja peoples are agriculturists, but they use very rudimentary instruments, a stick burnt to a point serving as a plough. Here and there certain industries have also survived, inherited from the Blemmyes, such as weaving, iron-smelting and forging, and making filigree work. The straight two-edged sword, the favourite weapon of the Bejas, is generally of German manufacture, but they also forge excellent weapons, swords and daggers; the scabbards are of wood, covered with leather, and amongst the rich embellished with elephants' ears. The shields they use are made of rhinoceros hide, or the skins of other large animals. Commerce is actively carried on amongst all the tribes, and in this respect the Bejas contrast singularly with their neighbours the Bazen or Kunama.

The customs of the Bejas, especially those which relate to marriage and the social position of women, are still very different from those of the Arabs; the contrast is complete between the precepts of the Koran and the traditional practices of divers origin. In certain respects the women are treated with unspeakable cruelty. Parents are obliged to make their daughters undergo dreadful surgical operations, without which they must renounce all hopes of obtaining a husband. But after marriage the wife is in no way under the control of the husband. She can return to her mother's tent whenever she pleases, and after the birth of a child she has the right to repudiate her husband, who must make her a present in order to be accepted again. If he insults or speaks rudely to her he is driven from the tent, and can only obtain re-admittance by presenting her with

a cow or a camel. Women are mentioned who have thus obtained all the husband's possessions and then abandoned them after having effected their ruin. The Beja women, and especially those of the Beni-Amer, have generally a remarkable fellow-feeling; directly one of them has a grievance they all share in her indignation. By virtue of the female customs, the wife should never show any apparent affection for the husband. She is bound to treat him with contempt and to rule him with threats and severity, and should he interfere with the household arrangements without having consulted his wife, the offence is considered unpardonable. It is frequently necessary to appeal to the "man of honour," whose duties as an intermediary have rendered him the "brother" of the wife, and his advice is always respectfully listened to. At the same time, although they have to complain of the control and often even of the violence of their wives, the husbands are after all the superiors in virtue of their love of work, bravery, and trustworthiness. The henpecked man who seeks the assistance of a woman is sure of finding in her an indefatigable defender.

The social status of the Beja woman evidently points to a former matriarchal government. The Arab authors who spoke of the Bejas of the tenth to the fourteenth century, relate that these people reckoned their genealogies from the side of the women, and that the inheritance passed from the son to the sister and from her to the daughter to the exclusion of the sons. The annals of the kingdom of Meroë, like those of Senaar, show what an important part woman has played in Upper Nubia, ever since the time of Queen Candace. Amongst the Hadendoas the women have never to undergo public accusation; if a crime has been committed by one of them everybody keeps silence, the men alone being answerable for the charge. Of all the "Arab" tribes that which is usually cited as universally practising the strange custom of the "fourth day free," doubted by only one traveller, d'Escayrac de Lauture, are the Hassanieh Bejas of the Nilotic Mesopotamia and Kordofan. By this custom, the women are only married for a certain number of days in the week, generally reserving every fourth day, on which she claims perfect freedom to do just as she pleases.

Under the Arab rule the Bejas have readily acquired aristocratic manners. The noble families of native or foreign origin, who can trace back their genealogy to a long line of ancestors, enjoy considerable personal authority over the body of the people, who support them and offer up sacrifices on their tombs. Moreover, it is they who own the slaves—captives or sons of captives, who have not yet entered into the community of free men by embracing Islam. The nobles frequently take to wife girls of inferior status, but a common man can never marry into a noble family, unless the holiness of his life, a miracle, or some prediction justified by the event, have enabled him to be classed amongst the sheikhs, also called fakih, and thus become the equal of the upper classes. In certain regions of Upper Nubia there exist entire colonies of "saints," who, like the nobles, fatten at the expense of the tribe. In order to insure their power over the nomad populations, the Egyptian governors had taken care to rely upon the political and religious chiefs of the country, and it was by the intervention of these latter that the

tribute was raised ; but the heavy taxes at last exhausted the patience of the Beja nomads, and a general insurrection against the Khedive's power spread throughout Eastern Sudan. It has recently been seen with what courage and absolute contempt for death the Beni-Amers, the Hadendoas, and the Bishârans have hurled themselves against the English squares, opening a path of blood with their lances up to the cannon's mouth.

TOPOGRAPHY.

Under the Egyptian rule, Upper Nubia was divided into provinces which partially coincide with the natural divisions of the country. At the outlet of the Abyssinian mountains the riverain countries of the Blue Nile constituted *Fazogl*. Lower down this name has been preserved by the central part of the ancient kingdom of Senaar, beyond which follow the provinces of *Khartum* and *Berber*. To the east *Taka* comprises the hills and the plains bounded on one side by the Atbara, and on the other by the Barka. The coast regions were divided between the provinces of Massawah and Suakin, the former of which has been partly occupied by the Italians, the latter by the English. Lastly, a few independent states, republics, or chiefdoms still occupy the borderlands between Abyssinia and the Sudan.

FAZOGL, FAMATA.

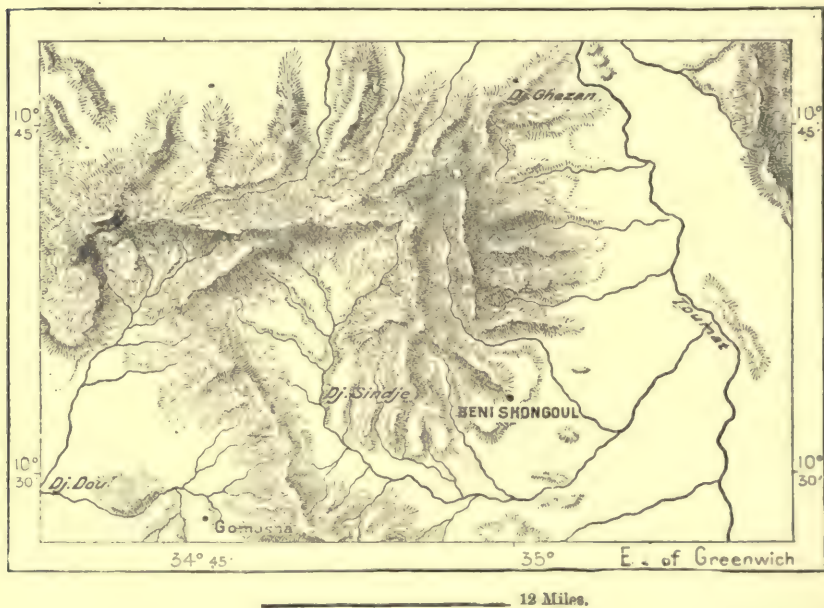
Fazogl, which has given its name to the upper province of the Blue Nile, and was, before the Egyptian rule, the residence of a powerful king, is now little more than a mere hamlet. As a capital it has been replaced by the town of *Famaka*, where Mohammed Ali had a palace built at the time of his visit to his southern possessions in 1839 ; a few scattered bricks are now all that remains of it. *Famaka* would be well situated as a commercial town if slave-hunting had not driven all the surrounding peoples into the mountains. The houses, built on a gneiss rock, skirt the right bank of the Blue Nile, near the confluence of a khôr and a little above the point where the river Tumat forms a junction with the Bahr-el-Azraq. Facing it to the south stands Mount *Fazogl*, the first high crest commanding the river to be met with on coming from *Khartum* ; hence it appears more imposing than many eminences of greater height, while the rich vegetation which clothes its slopes seems marvellous to those who come from the desolate northern wastes.

The valley of the Tumat had already long ceased to be Egyptian territory before the great insurrection of the Sudan peoples burst forth. Nevertheless, Mohammed Ali considered that this province was one day destined to become the treasure of his empire ; he counted on the gold washed down with the sands of the Tumat and its affluents to pay his armies and to free himself from the galling suzerainty of the Padishah. In consequence of these ambitious views he caused the upper basin of the Tumat to be explored by the Europeans Cailliaud, Trémaux, Kovalevskiy, and Russegger. But the expenses of the occupation of the country,

the wars that it was necessary to sustain against the tribes, the depopulation consequent on slave-hunting, and the surveillance of the convicts who washed the sand, cost the Viceroy much more than was covered by the product of the mines. Hence Said Pasha ordered them to be abandoned and the fortresses to be levelled, after which the towns were again reoccupied by their original inhabitants. Nevertheless the native gold-miners found their fortunes where the Government had met with financial ruin. The grains, called *tibr*, and usually collected in the quills of vultures' feathers, are used as money to purchase the merchandise brought by the *jellabi*, or local traders. The principal gold-washing stations are on the western side of the mountains, in the valley sloping towards the White Nile, and in the

Fig. 77.—FAZOOL GOLD MINES.

Scale 1 : 600,000.



middle of which rises the pyramidal Jebel-Dul, in all of whose ravines gold is found. The amount annually obtained is valued by Schuwer at £1,600, on which the Sheikh of Gomasha raises a tax of about a fourth. The soldiers he has collected round him are mostly slave-hunters, who have escaped from the disaster of Suleïman in the zeriba region. The Gallas who come from the markets of Tumat prefer another medium of exchange to gold-dust, and will only receive the "salt bricks" imported from Eastern Abyssinia in exchange for their goods. According to Schuwer, the inhabitants of the Tumat Valley receive yearly over 75,000 pounds of salt money.

FADASI.

Even after evacuating the country, the Egyptians compelled the riverain tribes of the Tumat Valley to pay them a tax of about £6,000; but beyond the district

of *Fadasi*, which stands in another fluvial basin, that of the Jabus, their authority completely ceased. *Fadasi* was the point where the travellers Marno, in 1850, Gessi and Mateucci in 1878, were compelled to stop, not being permitted to advance beyond the hill to the south of the chief town, which has been named *Bimbashi*, after the Egyptian "captain of a thousand" stationed in this place. Schuwer is the only traveller who has crossed the boundary of the Khedive's possessions at this point in 1881. *Bimbashi*, surrounded by numerous villages spread over the slopes of the mountain, commands a very extensive view from its upland terrace. It is a much frequented market-place, although not so well attended as that of *Beni-Shongul*, situated half-way to *Famaka*, in the vicinity of the gold washings and the ruins of *Sinjah*, the ancient capital of the country. Still farther north, in a fertile district on the right bank of the Tumat, lies the village of *Ghezan*, also a place of assembly for the caravans. Here the huge sycamore-tree which shelters the square, covers on market days a motley crowd of Bertas, Nubians, and Arabs, while the groves of lemon-trees scattered in the country recall the sojourn of the Egyptian garrisons.

SENÂR.

Below *Famaka* the town of *Rosérès*, or *Rosairès*, whose houses are scattered amidst groves of dum palms, is also situated on the right bank of the Bahr-el-Azraq; it has given its name to a *dâr*, or country, of considerable extent, governed by chiefs taking the title of king. Still lower down the village of *Karkoj*, surrounded by large trees which contrast with the barren lands in the vicinity, has now become somewhat important as a market for gums, and the converging point of several caravan routes coming from *Gedâref*, *Galâbat* and *Abyssinia*. It has inherited part of the trade which was formerly carried on with the city of *Senâr*, about 60 miles farther down on the left bank.

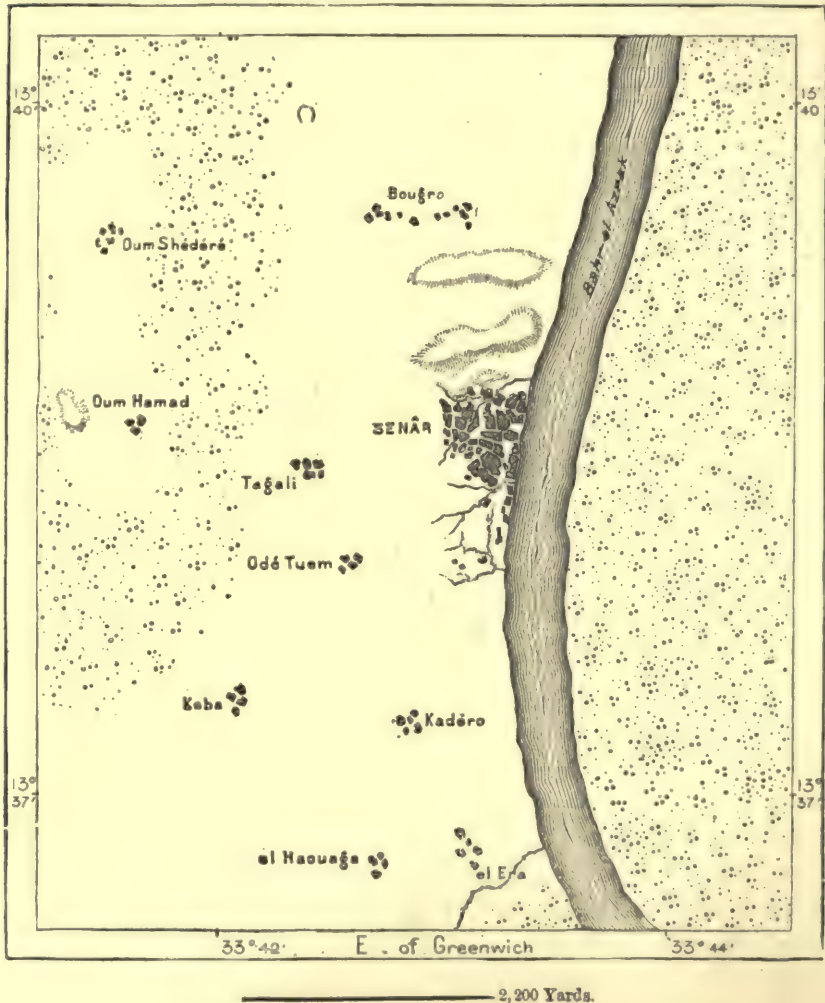
This ancient capital of the Funj kingdom, built at the commencement of the fifteenth century, has lost greatly since the seat of government has been transferred to *Khartum*. Heaps of rubbish and waste spaces now intervene between the groups of cabins, and of what was once the palace the walls are all that remain; the mosque, however, is still standing. It was in this city that Roule, the French Ambassador of Louis XIV., was assassinated in 1705, before he had reached the states of the sovereign to whom he was accredited. According to an Arab tradition he was suspected of intending to aid the Abyssinians to carry out their often-repeated threat to deflect the waters of the Nile southwards, far away from Nubia and Egypt. The inhabitants have scarcely any industry, except the manufacture of elegantly designed straw mats. Caravan routes run south-west towards the Blue Nile, leading to the two fords of *Abu-Zaid* and *Kelb*, formed by banks of shells. The Mesopotamian peninsula, as the Arabs call the "Island of *Senâr*," is only sixty miles in breadth. According to tradition it was at the ford of *Abu-Zaid* that the Arabs, guided by the hero of this name, crossed the Nile for the first time in order to spread themselves throughout the Sudan.

WOD-MEDINEH—KAMLIN.

Wod-Medineh, or *Wold-Medineh*, which after Senâr became the capital of the Egyptian provinces, was also a town densely populated in its double capacity as a garrison and trade centre. It is conveniently situated, standing nearly at the junction of the north-western Abyssinian rivers with the Bahr-el-Azraq, whilst

Fig. 78.—SENÂR.

Scale 1 : 60,000.



close above it is the mouth of the Dender, swollen by the waters of the Khôr Mahara and the Khôr El-Atshan; still nearer, but below the town, is the confluence of the Rahad, like the Dender navigable for eighty days in the year. The village, situated at the very mouth in the "Isle of Isles" (Jezirat el-Jezfret), has taken the name of Abû-Ahraz, or "Father of the Acacias," a term which is also frequently given to the river Rahad itself, the Shimfah of the Abyssinians.

At some distance from the river, near the ruins of the village of *Arbaji*,

destroyed by the Funj, stands the town of *Messalamieh*, in the midst of fields of durra, a strong place which the insurgents took from the Egyptians after a long and murderous siege. Before the war it had become a considerable market, precisely because it was distant from the river, so that the nomads had here to fear the passage of armies less than in towns lying on the banks of the Nile.

Below Abû-Ahraz, on the left bank of the main stream, a few ruins mark the site of *Kamlin*, or *Kammin*, where, under the protection of the Egyptian govern-

Fig. 70.—CONFLUENCE OF THE TWO NILES.

Scale 1 : 265,000.



ment, some European merchants founded in 1840 large soap, indigo, sugar and distilling factories. For a long time these establishments were prosperous, thanks to the cheapness of coal and labour, but more especially thanks to the monopoly possessed by the manufacturers, whose products the officers and soldiers were obliged to take in part payment of their salaries. But the forests have been wasted, the country has been depopulated, and the monopoly has met its usual fate, poverty and ruin.

KHARTUM.

As far as we search back in the history of the upper regions of the Nile, an important town has always stood in the vicinity of the junction of the White and Blue Niles. A geographical position of such importance could not be neglected even in barbarous times; but the vicissitudes of migrations and wars, perhaps aided by some changes in the course of the two rivers, have frequently compelled the town to shift its position. An ancient Christian city, Aloa, is known to have stood 10 or 12 miles above the "Elephant's Trunk" on the right bank of the Bahr-el-Azraq. Several remains of columns and sculptures have been found there, proving that the Bejas of Aloa possessed a civilisation superior to that of the states which succeeded them. All that now remains of this town are shapeless masses covered with brushwood, the building materials ready to hand having been used for the structures of Khartum. The Arab village of "*Old Sobat*" stands near the ruins, and on the opposite bank are the tile and brick works of "*New Sobat*." A few sites are pointed out as those of ancient churches, and bear the name of *Kenisseh*, a term evidently derived from the word "*Kilissa*" applied to Christian churches in the Turkish countries of Europe and Asia; at *Buri*, near Khartum itself, stands one of these *Kenisseh*. Not far from Wod-Medineh, crypts of Christian origin have been discovered; these ruins are the southernmost that have been hitherto found on the plains watered by the Blue Nile, beyond the Abyssinian frontier.

After the destruction of the empire of the Bejas, the town at the confluence, hitherto comprised in the realm of the Funj, stood farther north, some 7 miles below the present junction of the two rivers. This town, which still exists but in a very decayed condition, is *Halfaya*, the residence of the grand sheikh of the Jalins. An arm of the Nile, now dried up or filled only during the floods, joins the main channel west of Halfaya; it is surrounded by a garden of palms, sheltering its houses. Opposite and not far from the left bank, a small group of hills shelter a few trees in their valleys, and in the rainy season give birth to rivulets which wind through the plain.

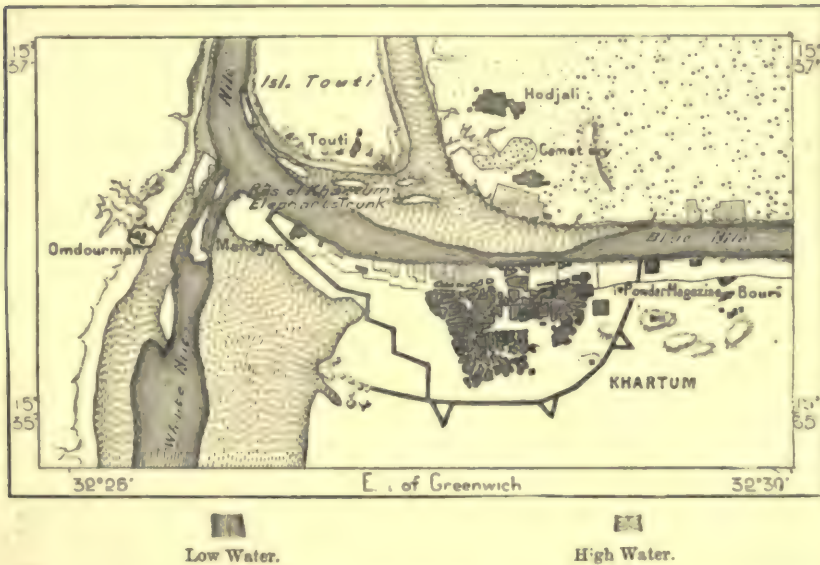
After its capture in 1821 by the Egyptians, Halfaya for several years still preserved a certain importance as the strategical guardian and commercial depôt of the junction; but the very point of the two rivers, called the "End of the Trunk," or *Ras-el-Khartum*, appeared to Mohammed Ali a much more suitable site for the capital of his vast possessions, and here he accordingly built the barracks and arsenal. In 1830, there was only one hut where, ten years after, stood the first city of the Nilotic basin beyond Egypt. Khartum, protected to the north and west by the broad beds of its two rivers, is certainly very well situated for defence, and its walls, flanked by bastions and skirted by a ditch, protect it from a surprise on the south and east; besides, a fortified camp situated on the right bank of the Bahr-el-Abiad near the village of *Omdurman*, renders it easy for the garrison to cross over to the western bank of the river and commands the route to Kordofân. Thanks to the rivers, the steam boats which ply below

Khartum command all the country on one side as far as the Zeriba region, and on the other as far as Berber and Abû-Hamed.

Recent events have proved the military importance of this position between the two Niles. From a commercial point of view, Khartum will not be so advantageously situated until a bridge is built over the Bahr-el-Azraq, so as to receive directly the caravans which come from Abyssinia, Kassala, and the shores of the Red Sea. Nevertheless, Khartum had become one of the great cities of the continent, and the busy population which till recently crowded its narrow streets was a mixture of Turks, Danaglas or people of Dongola, Arabs, and negroes of every shade of colour. Italian was becoming almost as much spoken as Arabic, and the exterior commerce was almost entirely in the hands of the French and Greeks. Khartum is the point where took place all the exchanges of Europe and Egypt

Fig. 80.—KHARTUM.

Scale 1 : 75,000.



with the regions of the Upper Nile; it was also the place whence emanated all the expeditions and the movements of military bodies, and where all the religious missions and commercial or scientific expeditions were prepared.

A town of soldiers, merchants, and slaves, Khartum has no remarkable monuments, and it is surrounded on all sides by spaces which, if not absolute wastes, are, at least, uncultivated and treeless. At the period of the Beja rule, the banks of the two Niles were said to be shaded with an uninterrupted forest of palms festooned with vines. Khartum is not a healthy town, at least during the portion of the year when the moist winds blow, increasing the waters of the rivers. Typhus has often more than decimated the population; but in winter the atmosphere is purified by the north winds and the public health is as good at Khartum as in any other African city. After a vigorous defence maintained for upwards of two years against overwhelming numbers, Khartum was betrayed to the Mahdi on

January 26th, 1885, when its heroic defender, General Gordon, and the Egyptian garrison, with nearly all the Christians still in the place, were massacred. This tragic event occurred only three days after the arrival at Metammeh of the advanced division of the British expedition, organized by General Wolseley for the relief of the place in the autumn of 1884. Thus the primary object of the expedition was defeated, and Khartum became for some time the centre of the Mahdi's power in the Upper Nile regions.

A few villages succeed Khartum and the town of Halfaya along the banks of the Nile. But for a distance of 120 miles no important place is met till we reach *Shendi*, in the Jalin territory, which is a collection of square-shaped houses, covering a space of about half a square mile on the banks of the river. *Shendi*, situated below the sixth cataract, in times of peace has a considerable trade with the towns on the Abyssinian frontier. Opposite it, on the western bank of the Nile, is the town of *Metammeh*, the depôt of the products of northern Kordofân; in the vicinity the desert sand is washed in order to extract the salt which is mixed with it. *Shendi* is the town where Ismail-pasha, the conqueror of Nubia and the banks of the Blue Nile as far as Fazogl, received the punishment he so justly merited for the massacres and devastations he had ordered; having unsuspectingly come to a banquet to which he had been invited by the chief of the district, he was burnt alive with all his officers. But soon after his death was avenged by rivers of blood-shed by the terrible "defterdar," son-in-law of Mohammed Ali. The village of *Gubat*, 2 miles south of *Metammeh*, was the extreme point reached by the British expedition sent to the relief of Khartum and General Gordon in 1884-5.

NAGA—MEROË.

This region of Nubia is already comprised within the limits of the ancient Ethiopia, a region where lived nations directly influenced by the general progress of Egyptian civilisation. Numerous ruins attest the splendour of the ancient cities here erected, and, according to the statements of the Arabs, the Europeans are still acquainted with but few of the monuments concealed in the desert. At a day's march south of *Shendi*, not far from the *Jebel-Ardan*, stand the two temples of *Naga*, covered with sculptures representing the victories of a king who bears the titles of one of the Egyptian Pharaohs; one of these buildings is approached by an avenue of sphinxes. At the time of Cailliaud's visit no inscription revealed to him the precise age of the temples of *Naga*, but the ornaments of the Greco-Roman style satisfied him that the town was still in existence at a relatively modern period. Since then, Lepsius discovered a Roman inscription, and several sculptures which apparently represented Jupiter and Christ.

About 12 miles north of *Naga*, in a desert valley, is a labyrinth of ruined buildings and refuse which the Arabs have named *Mesaurat*. The central building, whose ruins are still visible, is one of the largest known edifices, being 2,900 feet in circumference; its columns, fluted and sculptured, but without hieroglyphics, are evidently of Greek architecture, and whilst Cailliaud thinks it was a priest's college, Hoskin imagines it to have been a royal country seat.

The remains of the town in which Cailliaud recognised in 1821 the ancient Meroë, "capital of Ethiopia," stand 30 miles below Shendi, a few miles from the right bank of the Nile; in the midst of these ruins are scattered a few villages, amongst others that of *Es-Sûr*, which gives its name to the tarabil, or pyramids. The pylons, temples, colonnades, avenues of animals and statues are still standing; but the sandstone of Meroë, excavated from the neighbouring quarries, is not so durable as that of Egypt. The pyramids, to the number of about eighty, are

Fig. 81.—PYRAMIDS OF MEROË.

Scale 1 : 125,000.



divided into three groups, and mostly stand on hills; not having been undermined by stagnant waters, these edifices have resisted the ravages of time better than the buildings on the plain. Still none of the pyramids are intact, most of them having been damaged by curiosity-hunters. When accompanying a military expedition to this place, Lepsius with great difficulty prevented the systematic destruction of all the monuments of Meroë. In magnitude the Ethiopian pyramids will not bear comparison with those of Egypt; the largest are less than 66 feet square, and many do not exceed 13 feet in height.

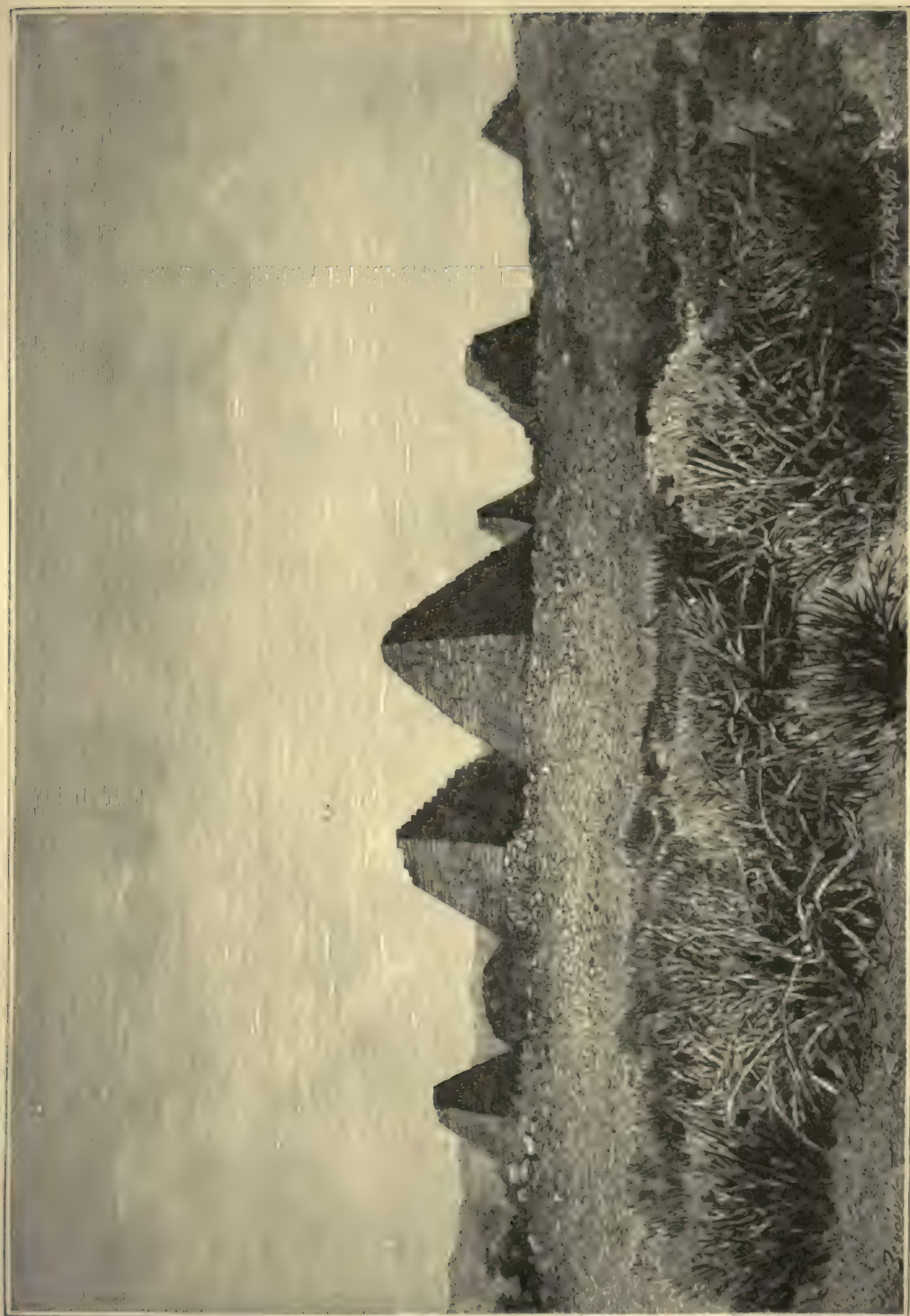
The numerous inscriptions collected at Meroë have resulted in the discovery of the names of thirty sovereigns who were at once kings and high-priests, and the very name of the city has been identified as Meru, or Merua. At the period when these pyramids were built, hieroglyphics had become an obsolete form of writing, the exact sense of which was no longer understood, and which was reproduced by imitation; hence many errors crept into the copy, so that their decipherment has been rendered very difficult and uncertain. Most of these inscriptions are in the Demotic Ethiopian character, derived from that of the Egyptians, but possessing only thirty letters. In these inscriptions, not yet completely deciphered, savants have attempted to trace the ancient language of the Blemmyes, the ancestors of the Bejas.

Opposite Meroë, on the western bank of the Nile, was apparently situated the public cemetery of the great city; considerable spaces are here covered with small pyramids, imitations in miniature of those of the great personages buried on the right bank of the river.

METAMMEH—KAMARA—GALÂBAT.

In the basin of the Atbara, which bounds on the east the peninsula called by the ancients the "Island of Meroë," there are at present very few towns, in spite of the general fertility of the valleys and the healthy climate enjoyed by so large a portion of this territory. Most of them are mere market-places, swarming with people during the fairs, the next day abandoned. Amongst these "towns" inserted on the maps of the Sudan, some are mere clearings in the forest or breaches on the banks of the rivers; the largest are *Gorgur* and *Dongur*, situated to the west of the Abyssinian plateau, in the country of the Dabaïna Arabs and the "Shangalla" Negroes.

Metammeh, capital of the territory of Galâbat, and often called by the name of its province, is during the dry season the most active centre of the exchanges between the plains of the Bejas and the Abyssinian plateaux. To the south stand the abrupt escarpments of Râs-el-Fil, or the "Elephant's Head." As an emporium Metammeh has succeeded to *Kamara*, a village situated in the vicinity. Compared with the surrounding groups of huts, it is almost a large town; with the "tokuls" scattered in the suburbs in the midst of tobacco, cotton, and durra plantations, it covers a space of about 40 square miles. Although plundered by the hordes of Theodore, it soon regained all its importance; the hills skirting the Meshareh, an affluent of the Atbara, were again covered with huts in which the merchants warehoused their goods. The Arabs, Funj, and Bejas, have returned to the market, and brick houses, whose ground floors are filled with merchandise, now surround the market-place. Some five or six thousand traders, mostly Arabs, assemble at Metammeh, and over a thousand Abyssinians, porters, wood-cutters, and retailers of mead descend from their mountains to collect the crumbs of the feast. Many crocodiles sport in the waters of the Meshareh, and betray no fear of the vast



PYRAMIDS OF MEROË—SOUTHERN GROUP.

crowds, whom they never attack, whilst their own lives are protected by the sheikh of Galâbat.

Most of the residents in Metammeh are Takruri, who set the example of work and industrial pursuits to the neighbouring peoples. Not only do the Takruri import skins, coffee, salt, some stuffs and beasts of burden from Abyssinia, bartering them with the merchants of the Nile, but they also deal in the products of their own country, honey, wax, tobacco, maize, gum, incense, dyes, and drugs. They supply the Arabs with more than half of the cotton they use in weaving their togas. From the provinces of the Sudan they receive more especially glass trinkets, arms, and the *talari*, or Maria-Theresa crown-pieces, which are the exclusive currency in northern Abyssinia.

The slave trade in this district, till recently more active than all the others, although officially forbidden at different times, has always been carried on. But it is no longer openly conducted in public; in 1879, the sum obtained by the sale of slaves amounted to more than £20,000. At the time of the Egyptian rule, the governor of Khartum maintained a garrison of two thousand men in Galâbat. At present Galâbat has become an independent principality, no longer paying tribute either to Egypt or Abyssinia.

GEDAREF—TOMAT.

Doka, on the route from Metammeh to Abu-Ahraz, is a commercial outpost of Galâbat situated at the confluence of the Rahad with the Blue Nile. But in this lowland region the chief, if not permanent at least temporary, market is *Sûk-Abû-Sin*, or "Market of Father Sin," also called *Gedaref* after the province in which it is situated. During the rainy season *Sûk-Abû-Sin* is visited only by the nomads in the vicinity; but directly the kharif is over, when the Atbara and the other rivers of the plain are again fordable, and when the merchants have no longer to dread the attacks of the venomous flies on their camels, the caravans arrive from all parts, and as many as fifteen thousand persons are often assembled on the market-place. Before the war, gum, wax, salt, cereals and cattle were the chief wares in the market of Abû-Sin, and Greek merchants mingled with the crowds of Arabs and Bejas. *Tomat*, at the junction of the Settî with the Atbara, is also a town where a few exchanges take place; *Gos-Rejeb*, on the left bank of the Atbara, lies on the caravan route between Shendi and the port of Massawah. The ruins pointed out by Burckhardt are a proof that the Egyptian merchants also passed through this region on their journey from Meroë to the coast at Adulis Bay.

KASSALA—SABDERAT—ALGADEN—DOLKA.

At the present time the most important town of the country is *Kassala-el-Luz*, capital of the province of Taka, and, since 1840, the chief fortress of all the region comprised between the Nile and the Red Sea; it is also called Gash by the natives, after the stream whose right bank it skirts. After having served as a

bulwark of Egypt against the Abyssinians, Kassala, when evacuated by its Mussulman garrison, appears destined to serve as the Abyssinian outpost against the Mahomedan lowlanders. Situated at a height of 1,900 feet at the western base of a "seven peaked" mass of granite rocks rising over 4,000 feet above the plain, and its forests of dum palms, Kassala presents one of the most attractive prospects in Africa. It appears to have succeeded a still larger town, that of *Faki Endoa*, which stretched along the torrent at a distance of nearly 3 miles. Commanded by a strong castle, the remains of which are still to be seen on one of the "heads" of the neighbouring rock, this town was the capital of the Hallenga nation, then powerful, but now reduced to a few wretched communities of pastors and agriculturists. The mountain is pierced with grottoes which are said to hold the waters of a subterranean lake, and whose labyrinths appear to have been formerly inhabited by man; a few troglodytes are reported even still to live in the galleries of the rocks.

By its position on the lower course of the Gash or Mareb, Kassala commands the distribution of the waters along the riverain lands. A Pasha even desired to become the absolute master over the fortunes of the tribes by damming up the river before Kassala, so as to deflect it westwards towards the Atbara, and thus force the Hadendoas to come and beg permission to purchase a little rivulet to irrigate their fields. Under the direction of the European Werne, who lent himself to this iniquitous work, a dyke 5,430 feet long effectually dammed up the current of the Gash and caused it to overflow into the western steppes; but the Hadendoas, who felt it was a matter of vital importance to them, attacked the dam with such fury, that in spite of the soldiers who defended it, they soon made a breach through which the water flowed back to its natural bed.

Before the rising of the tribes who favour the Mahdi, Kassala had acquired great importance as a point of transition for forwarding cotton, and vast cotton gins are still to be seen where hundreds of workmen were assisted by steam-engines. Kassala also prepared leather and manufactured mats and soap. The first attempt of the Egyptian government in 1865 to open telegraphic communications between Kassala, Berber, Suakin, and Massawah, did not succeed; over eight thousand camels were lost in this enterprise. But a second attempt, in 1871, was more fortunate, and a network of telegraphs was finally constructed, the stations serving also in the capacity of caravanserais for travellers. From Kassala to Massawah the journey occupies sixteen days by the route followed by the telegraph, through the country of the Bogos. Wells have been dug by the side of each station, between Kassala and Abu-Ahras.

In the vicinity of Kassala are a few villages occupied by settled Hallenga, Hadendoa or Bazen populations, and during the dry season, temporary camps are pitched in the dried-up bed of the Gash. Eighteen miles to the east is the town of *Sabderat*, whose artisans are occupied with weaving cloth and leather work. This place perpetuates the memory of the defterdar's atrocities, who massacred all the inhabitants and made pyramids of the bodies, so as to poison the air and thus prevent the repopulation of the country.

To the north succeed the two large Hadendoa villages of *Miktinab* and *Filik*, which are of some importance as market-places. To the south-east the Bazen peasantry, half converted to Islam, people the village of *Elit*, built at a height of 1,330 feet above the plain, on an almost inaccessible terrace half-way up the side of a granite mountain, scooped out at the top into a cultivated crater of quadran-

Fig. 82.—KASSALA.

Scale 1 : 125,000.



gular shape. The "boiler" of Elit is probably a sinking of the soil, such as is frequently met with in rocks pierced with grottoes.

North of Elit and already on the slope of the Khôr Barka, is the village of *Algaden* or *Algeden*, whose houses are scattered amidst the overturned blocks on the sides of Mount Dablot or Doblut, which overlooks a vast horizon of hills and plains between the two rivers Mareb and Barka. Algaden lies on the route to Mecca taken by the Takturi pilgrims, who support themselves from village to

village by preaching, praying, and selling amulets; in this way they have converted the population of Algaden, who are mainly of Bazen origin. In a neighbouring plain, the people of Algaden and Sabderat in 1870 gained a sanguinary victory over an army of Abyssinians, 10,000 of whom were left on the battle-field.

To the south-east of Algaden, in the Barea country, between the Gash and the Barka, the Egyptians have recently founded two military stations, *Kufit* and *Amideb*. The first was abandoned in 1875, but Amideb was still occupied at the general rising of the tribes; it is one of the places that England has by treaty handed over to the Abyssinians. *Dolka*, on a rock which rises to the east of the valley of the Anseba, long resisted the attacks of the Khedive's troops. In the neighbourhood are the ruins of a town and some Christian churches which bear a few Abyssinian or Himyaritic inscriptions. The principal town of the Habab country is *Af-Abad*, or *Tha-Mariam*, situated in a circular plain, at the foot of a precipitous mountain pierced with grottoes.

ED-DAMER—BERBER.

Below Kassala on the Gash, and Gos-Rejeb on the Atbara, there is only one town in the basin, *Ed-Damer*, lying south of the confluence in the southern peninsula formed by the Nile and the mouth of the Atbara. Here dwelt the Makaberab tribe, whom Schweinfurth and Lejean believe to be the somewhat legendary Macrobian of ancient writers. But this town, which was formerly a brisk market, has lost its commercial importance and become a city of "saints and teachers." It has schools, formerly celebrated, hotbeds of the Mussulman propaganda, but it is no longer a rendezvous for caravans.

Some 30 miles lower down on the same bank of the river, is the commercial centre of the great river and its north Abyssinian tributaries. *Berber*, till recently capital of an Egyptian province, is the largest mart between Khartum and the Egyptian frontier, properly so-called. Berber, so named from the Barâbra people, who occupy this region of Nubia, is officially called *El-Mekheir*, *El-Mukheir*, or *El-Mesherif*. Before the present war, during which Berber has been almost entirely destroyed, the town skirted the river bank for a distance of several miles, its white terraced houses standing in the midst of acacia and palm groves. A few gardens surround the town, beyond which immediately commence the uncultivated, almost desert, spaces, visited only by the Bisharin nomads.

Berber is the starting point of the most frequented caravan route between the Middle Nile and the Red Sea. At this point, the distance which separates the river from the sea is, following the winding desert route, only 250 miles. If well supplied with food and water, travellers can easily complete this journey in less than a week, although they usually take fifteen days; sooner or later a few hours will suffice, thanks to a railway already commenced, and on which military trains were running in 1885 from Suakin, for a few miles inland, to *Otao*, the present terminus on the route to Berber. When this line is completed, Berber will become the port by

which all the produce of Upper Sudan will be exported, and the Nile will be the commercial affluent of the Red Sea.

The two caravan routes between Suakin and Berber traverse vast sandy tracts where the water in the wells is brackish. The route lies over granite and porphyry heights, crossed by the pass of Haratri, the water-parting between the Nile basin and that of the Red Sea, standing at a height of 3,000 feet, between mountains rising to twice that elevation. Before the war 20,000 camels, laden with gum, annually crossed the desert between the two towns, which will probably soon be connected by rail.

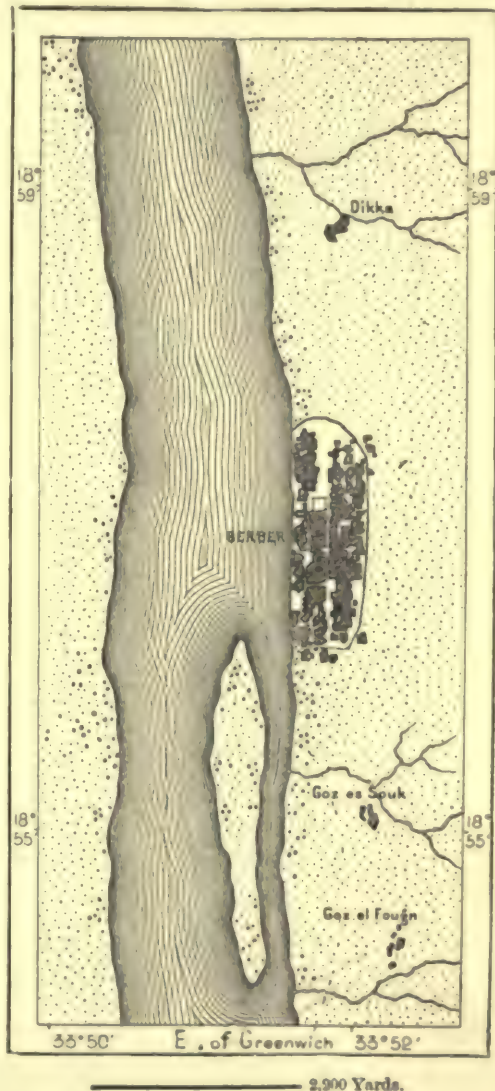
SUAKIN—SINKAT—TOKAR.

Suakin, or Sawakin, is the safest port on the Red Sea coast, and resembles that of Massawah in its geographical position. The riverain zone of coral banks is pierced by a winding channel which penetrates over 2 miles inland, terminating in an oval-shaped basin about 1 mile from north to south. To the west are sand-banks which contract the sheet of water, and are continued by shallows overgrown with reeds. Two round islands, partially fringed with rocks, exceed the level of the basin by several feet. One of these islands, that of *Sheikh Abdallah*, is used exclusively as a cemetery; the other, farther south, comprises the town of Suakin, properly so-called. The chief port lies between these two islands, but vessels of the heaviest tonnage can also anchor north of the island of Sheikh Abdallah; in this species of lake, which seems to be surrounded by land on all sides, vessels are perfectly safe from the winds and surf. The port, opened in the midst of a beach rendered very dangerous by the multitude of reefs, is well worthy the name of the "harbour of the protecting gods," which many authors believe to have been given it during the time of the Ptolemies.

Before the warlike events which have procured for Suakin a name famous in contemporary history, the annual movement of the shipping was about 12 steamers

Fig. 83.—BERBER.

Scale 1 : 82,000.



and 300 Arab vessels, which carried rice, dates, salt, cowries, and European merchandise, to be exchanged for slaves, mules, wild beasts, and the many products of the Abyssinian spurs, such as gum, ivory, ostrich feathers, skins, wax, musk, grains, and coffee. Suakin is the port where the pilgrims embark for Mecca, to the number of six or seven thousand annually; the distance from here to Jeddah is about 20 miles including the deviations caused by the reefs. The slave merchants from the interior present themselves in the disguise of ordinary travellers, accompanied by their wives, concubines, and servants. But on their return from Arabia to Suakin,

Fig. 84.—SUAKIN IN 1882.

Scale 1 : 50,000.



they have no longer wives or servants; divorce, desertion, and unforeseen events being supposed to have relieved them of their families and followers.

The town, overlooked by several minarets, consists of stone houses with wooden balconies and "musharabiehs" elegantly carved. It is a cosmopolitan city, where the trade is chiefly in the hands of the Arabs. Turks and Hedarmeh, or "Men of Hadramaut," here meet the Greek, Maltese, or European merchants. But the native population live in huts of branches covered with mats outside the town in the suburb of *El-Kef*. It is a far more extensive place than Suakin itself, with which it is connected by a low bridge some 330 feet long, and since 1884 by a railway

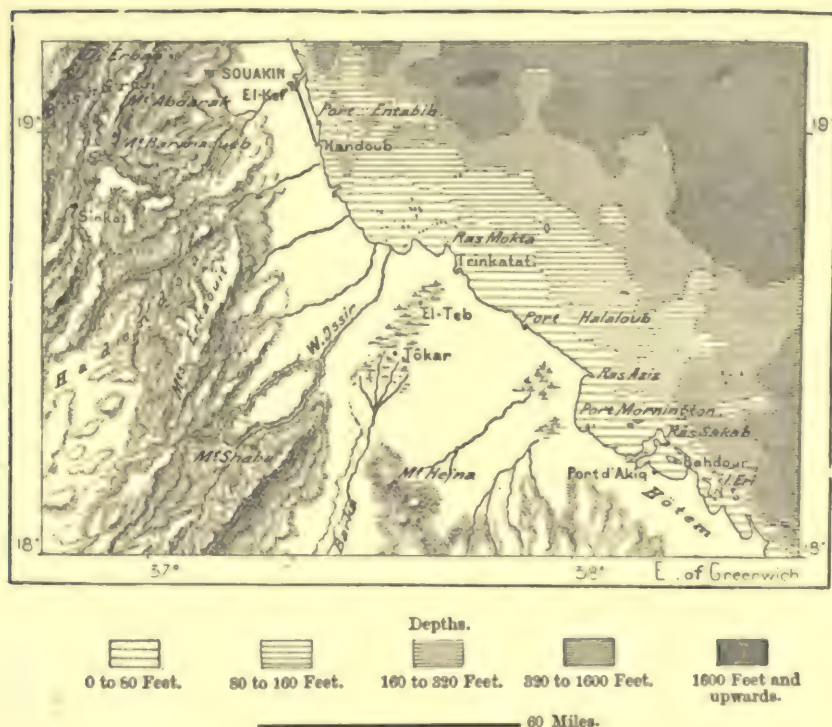


GENERAL VIEW OF SUAKIN.

viaduct. The huts of El-Kef skirt the southern shore of the basin, opposite Suakin, and extend on both sides of the route to Berber. The Hadendoas who live in this suburb employ themselves in transporting and stowing the merchandise, and supply the town with coal, food, fowls, butter, fruits, vegetables, and drinking water. In winter they are twice more numerous than in summer, when they retire to graze their flocks on the high mountains in the vicinity. Suakin, although it is well protected from pillaging raids by its insular position, depends entirely for its

Fig. 85.—SUAKIN UPLANDS.

Scale 1 : 3,000,000.



maintenance on the mainland suburb, and it has been found necessary to enclose the latter with fortifications, to protect it against the Bejas, who recently rose against the Egyptian Government.

The vital importance of Suakin with regard to trade and political power is fully appreciated by the belligerents. The sanguinary battles which have taken place in its vicinity, to the west near the fortified camp of Sinkat and the wells of *Tamanieh* and *Hashin*, to the south-east before the stronghold of *Tokar* and in the oasis of *El-Teb*, prove how essential it would be for the Mussulman world to establish free communications between Mecca, capital of Islam, and Africa, its largest province, populated with the most fanatic of the faithful. Great Britain watches closely this continental port of Africa and, under the name of Egypt, this power has definitely taken possession of it so as to bring the whole of the Upper Nile within its commercial and political influence. Hitherto the Beja insurgents

have been able to maintain none but precarious relations with their co-religionists on the opposite coast by means of small craft escaping from the creeks along the coast under cover of night.

Before Suakin was blocked by the rebels, the merchants of this town withdrew during the hot season to the smiling valley of *Sinkat*, which, at a height of 870 feet, lies amid extinct volcanoes and cliffs of an extremely fertile reddish marl; the slopes have been laid out in steep terraces planted with acacias and fruit trees. *Tokar*, a little fort situated in a fertile valley irrigated by numerous small canals derived from the Barka, stands in the middle of the "granary" of this province. During the sowing and harvest seasons, more than twenty thousand labourers are employed in the fields of Tokar.

Some of the *marsa* or *mirsa*, that is harbours, on the neighbouring coast may perhaps acquire some importance when the mountains of the interior become populated and cultivated. One of the most convenient, as a market of the Khôr Barka Valley, will undoubtedly be the port of *Akiq*, a vast and deep basin well protected, like that of Suakin, by islands and peninsulas; this port is without doubt one of the best in the Red Sea. In the chief island of the roadway, a Beni-Amer tribe has founded the little village of *Badur*, before which vessels can cast anchor in a depth of from 23 to 25 feet. On the coast of Suakin and Akiq the sea water teems with animal life. The surface of the sea is often covered for miles with ripples which seem to be caused by the breeze, but are really produced by the movement of a small fish of the sardine type, myriads of which play in the upper layers of the water.





CHAPTER IX.

KORDOFÂN.



HIS country, which was till recently an Egyptian province, and which, at the commencement of 1883, became the centre of a new state destined probably to have but a short existence, is a perfectly distinct natural region, although without any clearly defined frontiers.

On the whole its form is quadrilateral, inclined from the north to the south, parallel with the main stream between the Sobat and Blue Nile confluence. On the south and east Kordofân, or Kordofal, has for its natural frontiers low-lying tracts flooded by the Nile; to the north and west it merges in the steppes roamed over by nomad tribes. The total area of the region, thus roughly defined, may be estimated at 100,000 square miles, or nearly half the size of France. This space is very sparsely populated; in 1875, Prout, an American officer in the Egyptian service, made an official return, according to which the inhabitants of the eight hundred and fifty-three towns and villages of Kordofân numbered 164,740 persons. At the same period the nomad tribes amounted to a total of 114,000 persons, but the governor of the province had made no attempt to number the turbulent mountaineers of the south. The total population of Kordofân can be provisionally estimated at 300,000, giving a density of about three persons to the square mile. Wars have frequently devastated the country, and it is supposed that the number of people has considerably decreased since the massacres ordered by Mohammed Bey, the terrible "Treasurer," who conquered this region for his father-in-law, Mohammed Ali. Fresh butcheries have again taken place since the Mahdi, or "Guide," has made Kordofân the centre of his empire, and proclaimed the holy war throughout his camps.

PHYSICAL FEATURES.

By the general slope of the land Kordofân belongs to the Nilotic basins. If the rains were sufficiently abundant the wadies, which dry up at the mouth of the mountain valleys, would reach as far as the White Nile; even the waters rising on the western slope flow to the Nile intermittently, on the one side through the Keilak and the Bahr-el-Ghazal, on the other through the Wady-Melek. In other

respects the level of the land, which varies from a mean height of 1,330 to 1,660 feet, varies but slightly in a large portion of the country; in many places the running waters are said to follow an uncertain course before excavating a regular channel towards the Nile. Throughout nearly the whole of its extent Kordofân is a gently undulating steppe, whose hills, seldom more than a few feet high, serve as landmarks during long hours of march. It would be easy to drive vehicles here, and thus replace the use of camels as a means of transport. Isolated peaks rising from the middle of the plain present an imposing appearance, thanks to the general uniformity of the spaces which they command. One of them, the Jebel-Kordofân (2,830 feet), which has given its name to the country, rises about 12 miles east of the capital, El-Obeïd; near it is the almost regular pyramid of Jebel-el-Aïn. The upper strata consist almost entirely of granitic sand, the decomposed remains of mountains which contain in abundance particles of mica mixed with impure clays. At a depth varying from 100 to 166 feet are found rocks of mica schist.

At a mean distance of 120 miles to the west of the Nile, the central region of Kordofân rises into mountainous masses, whose crests attain a height of many hundreds of feet above the plain. To the north-west the Jebel-Katul and the Jebel-Kaja are protected on the side of the plains by rocks sufficiently inaccessible to afford the independent tribes a refuge against their neighbours. To the north some isolated granite cliffs, amongst others the Jebel-Haraza, command the winding caravan route between El-Obeïd and Dongola. In the centre of Kordofân the Jebel-Deyer, covering a space of about 200 square miles, raises its crests to an altitude of over 2,660 feet, or 1,000 feet above the surrounding steppes. Its outer walls, pierced with a few breaches, form a complete rampart round it; but inside, the natives say, there is a deep valley, a basin flowing with water and well wooded, which the surrounding nomads describe as an earthly paradise. To the south of this elevation the steppe no longer continues in monotonous undulating hillocks, as in the north-west of Kordofân, having no other arborescent vegetation than a few groves of stunted acacias and here and there a baobab, whose twisted branches stand out against the horizon. It now becomes a level, fertile, and well-wooded plain, from which the bluish cones of Mounts Tagala are visible, girdled with verdure at the base and running southwards, towards the steppes inhabited by the Baggâra, for a distance of at least 30 miles. Farther west, the other mountainous masses, also formed of granite rocks, have taken the general name of Jebel-Nuba, or Dâr-Nuba, that is to say, "Country of the Nubas," after the people inhabiting them.

HYDROGRAPHIC SYSTEM.

The mountains of Southern Kordofân receive a much larger quantity of water than those of the north. The showers which fall in the Jebel-Nuba are sufficiently heavy to give birth to a khor, the Abû-Hableh, which flows to the east and north-east for a distance of over 180 miles before finally disappearing in the ground. It is even said that during certain very rainy years a little water from Kordofân has

reached the Nile through this fluvial channel. Throughout the course of the Abû-Hableh the surplus waters form during the kharif season, that is to say from June to October, temporary sheets of water which are usually marked on the maps as El-Birket, or El-Rahad, that is, "Lakes," in a pre-eminent sense. But water rarely remains in this reservoir till the end of the dry season; however, on digging in the sand to a depth of 8 or 10 feet, sufficient can be obtained to quench the thirst of both man and beast. Most of the other pools, generally called *fulahs*, are flooded only during the rainy season. In the inhabited region of Northern Kordofân, estimated by Prout at 17,200 square miles, there are neither rivers nor ponds, but only funnel-shaped wells sunk to a depth of 80 and even 160 feet, as far as the mica schist bed, which forms a layer through which the rain water, filtering through the light soil on the surface, cannot penetrate. The water in these wells is reached by steps cut round the excavation. The scientific exploration of this country has proved the existence of eight hundred wells, but at least two hundred of these are completely dry for half of the year, and the water of many is brackish or even salt. According to Escayrac, Lauture, and Matteucci, the general dessication of the country has been undoubtedly going on for many generations, and several wells which formerly furnished water in abundance have had to be abandoned. The annual rainfall, which is on the average 9 inches at El-Obeïd, somewhat more in the mountains of the south, and less in those of the north, is not sufficient to fill all the wells sunk in the hollows. Hence entire villages are abandoned during the dry season. As soon as the dokhn, the only kind of millet which flourishes in this dry climate, has been harvested, the cultivators migrate to the wells which contain a little water throughout the year, and do not return to their fields till the commencement of the kharif. In the villages and towns water is a commercial article, and towards the end of the dry season it occasionally costs more than wine in wine-growing countries; in 1873 a measure of two or three gallons was sold for a dollar.

CLIMATE OF KORDOFÂN.

In spite of the altitude of Kordofân, the temperature of this country is one of the hottest in the world. The season of intense heats commences in March, when the thermometer frequently rises to 105° F. in the shade, and the air mixed with the desert sand is almost suffocating. After the three months of the *sef*, or dry season, dense clouds are collected in the southern horizon, announcing the approach of the kharif. The beginning of June is ushered in by heavy showers, very violent but of short duration, with intervals of fine weather. The rainy season usually commences with atmospheric disturbances, whirlwinds rushing over the steppes; but soon the aerial currents regain their equilibrium, and the south-west wind, a continuation of the south-east trade wind in the southern hemisphere, prevails over this part of the north, following the direction of the sun. During this season the temperature is maintained with a remarkable uniformity between 77° F. and 92° F., the oscillations of the thermometer seldom exceeding 12° F. Such a climate would be very agreeable, but for the vapours and miasmas with which the air is saturated,

causing residence in Kordofân to be very dangerous to Arabs, Turks, and Europeans, who often fall victims to the endemic fevers. Towards the end of September, after three or four months of intermittent rains, the wind changes. The north-east trade winds, deflected south by the progress of the sun towards the tropic of Capricorn, now sets in, bringing cold weather in its train; during the night the temperature occasionally falls to 59° F.

FLORA.

The flora of Kordofân is not very rich; acacias, tamarisks, baobabs, and such-like trees give the landscape its characteristic appearance in the regions which are not barren or completely deforested. The acacias, which furnish the gum of commerce, belong to various species. The grey-barked variety, which yields the best quality of gum, is scattered in numerous thickets throughout the eastern part of the country. In the southern region the red-barked acacias, which furnish the least valuable kind of gum, extend in vast forests almost useless from an economical point of view; very few villagers or nomads take the trouble to collect the gum which exudes from these trees. The most important harvest throughout nearly the whole of Kordofân, is that of the dokhn (*penicilaria typhoides*), which arrives at maturity four months after being sown, a period corresponding to the kharif. This variety of millet requires so little moisture that it thrives better on the sandy dunes than in the hollows; nine-tenths of the population live on this dokhn. The durrah, or Egyptian millet, is cultivated only in the well-watered mountain valleys. Wheat, sesame, haricots, tobacco, and cotton are found in a few districts near the capital. Hemp is used for interlacing the walls of the huts.

Of all the vegetable products of Kordofân, gum is exported in the largest quantities; the chase also contributes to the movement of the exchanges more than cattle-breeding. Ostrich feathers are the most valuable articles that the northern caravans obtain from the natives. But these latter have almost exterminated the ostrich in the eastern plains of the country; herds of ostriches are now met with only to the west of the Kaja Mountains, and the frontier of Dar-Fôr. The steppes of Kordofân would be admirably adapted for ostrich farms; but at present this bird is not kept in captivity, and the hunters kill it to such an extent that it is yearly diminishing in numbers.

The ibis is very common in Kordofân, as many as fifty nests being found on one tree; this bird like the stork, is considered sacred, and the natives do not permit strangers to kill it. The people of Kordofân have a few domestic animals, such as horses, asses, goats, and sheep; but the pack-animals belong more especially to the nomad tribes. To the south the Baggâras possess at least one hundred thousand humped oxen, trained to bear burdens, but quite useless for field operations; the cows supply but little milk. The scarcity of water in the plains has modified the habits of the native breed of cattle, which come to the troughs only every two or three days. Camels thrive only in northern Kordofân, amongst the Kababish nomads; south of the thirteenth degree of latitude they perish under the attacks of swarms of gadflies and other venomous insects.

INHABITANTS OF KORDOFÂN.

Central Kordofân, in the vicinity of El-Obeïd, is one of the most densely inhabited regions of eastern Africa; in a radius of about 60 miles round the capital, the villages are on the average not more than 2 or 3 miles from each other. Each *tokul*, or circular hut of thatch with a conic roof, and occasionally the village itself, is surrounded by a belt of prickly hedges. The peoples who occupy these settled groups of houses are of a very mixed race, and the original type is very difficult to be recognised.

Founded as commercial stations on the routes from the Nile to the countries of Central Africa, the towns of Kordofân are places of assembly for the merchants, who here come to rest from their march across the surrounding deserts. The soldiers and slaves of every tribe who accompany these traders tend to corrupt the race and destroy its primitive elements. The people who are the result of these crossings are intelligent, happy, talkative, and "given to dancing and amusements."

In some villages the Ghodiats (Gilledats or Gowameh), supposed to be of more or less pure aboriginal descent, are still said to survive. According to Munzinger, who calls them Kadejat, they are related to the Funj. They dwell to the east and south of the mountains of Kordofân and Jebel-Aïn or "Mountain of the Waters," and, in spite of the conquests and changes in the political régime they still constitute an independent group. They acknowledge one of their own people as a sheikh and pay tribute to him; but if they are not satisfied with him they beseech a fakih to take off his turban of investiture and place it on the head of another person. This ceremony is quite sufficient to effect a transfer of the authority.

THE MUSABATS AND ZOGHAWAS.

By virtue of a long occupation, the descendants of those who invaded this country at an already distant period are considered as having the best right to the name of Kordofanese. Such are the Musabats, who say they are of Fôr descent, and whose chief, residing at El-Obeïd, still takes the name of sultan. Such are also the Kunjaras, likewise of Fôr descent, who obtained possession of Kordofân at the end of the eighteenth century, but who were compelled to yield their power to the Egyptians in 1820, after their defeat at the battle of Bara. About one thousand of them still live isolated in a few villages near El-Obeïd, and their chief takes the title of sultan, like that of the Musabats. Some twenty years ago a few Kunjara still spoke their native Fôr dialect; but Arabic has now become generally employed by them as well as by the sons of the conquering Forians.

The Zoghawas, the remains of the nation which in the twelfth century ruled over all the space comprised between the mountains of Dar-Fôr and the Nile, are still to be found in the northern part of Kordofân. The other inhabitants of the country whose origin is known are the Jalin Arabs, who have nearly all the trade in their hands, and the people of Dongola, the Danageleh or Danagla,

who were charged by the Egyptian Government with collecting the taxes. Christian and Mussulman Syrians, Albanians and Greeks, are the non-African elements which are met with in Kordofân, and which contribute to the intermingling of the races. But the modification of the type is more especially due to the people of the neighbouring tribes brought in by the dealers, such as the Nubas, Denkas, and Bongos. The Takruris, Fellatas, and other western immigrants, travelling with the double object of selling their merchandise and propagating the doctrines of the Koran throughout the towns along their route,

Fig. 86.—CENTRAL KORDOFÂN.

Scale 1 : 650,000.



have also settled down in the country, and constitute new tribes by intermarrying with the daughters of the Arabs. A great number of Takruri come to Kordofân to offer their services temporarily at the sowing or harvesting seasons, and when they are well received they settle down in the country. The islands of the White Nile, which however, are not considered as belonging to Kordofân, are nearly all inhabited by Arabs. One of them, the largest and best cultivated, is that of *Abba*, in which the Mahdi, Mohammed-Ahmed, revealed his mission to his first disciples, and gained his first victory over the Egyptians in 1881.

THE NUBAS.

The Nubas, who occupy the Jebel-Deyer, south of Kordofân, and a few of whom are still found on other uplands, have a language of their own; but it cannot be positively asserted that they are related to the Nubians, from whom they are separated by a desert and by other populations. Driven from the plains and massed in the mountains, they lead a precarious life, being considered as wild beasts and hunted as such. In Kordofân the name of Nubas is synonymous with slave, and when captured this is indeed the condition to which they are reduced. As their small republican communities have not been able to form a solid confederation, they make no resistance to their enemies. Nevertheless there are a few Nuba villages which by payment of a tribute acquire the right to live unmolested near the plains, and are allowed to descend to the markets to dispose of their goods. The Nubas dress like the Arabs, but do not plait their hair. They are completely black, with the face very prognathous, nor do their features possess that peculiar sharpness which distinguishes the riverain Nubians of the Nile. According to Munzinger, they are also amongst the least intelligent Nigritians; as slaves they can be employed only in rude and monotonous labours, but they are good-natured, honest, and constant in friendship. When they are in the company of Mahomedans the Nubas call themselves servants of Allah; but they do not appear to render him any kind of worship. Their only priests are the "makers of rain," and magicians who heal diseases by gestures and incantations. The rite of circumcision was practised by them previous to the influences of Islam.

The vocabularies collected by Munzinger, Russegger, Ruppell, and Brugsch prove that the dialect of the Nubas differs little from that of the Nilotic Nubians, the principal differences bearing in certain portions of the language. To the west of the Nubas are said to live a still more savage people, the Gnumas, Negroes of tall stature who go naked, and of whom it is related that they kill the old men, the infirm, and those attacked by contagious diseases, so as to shorten their voyage to a better world; by the side of the corpse in the grave they place food, a pipe of tobacco, weapons, and two pairs of sandals.

THE TAGALAS.

The Tagalas (Tegeleh, or Dogoleh) dwell in the mountains of the same name. Although neighbours of the Nubas, they speak a language entirely distinct in words and structure. They themselves say they are Funj, although they can no longer understand their kindred of Senâr. Their king wears the three-horned headdress which formerly served as a crown to the king of the Funj, and which has been borrowed from them by the *deglet*, or princes of the Hallengas, Hadendoas, and Beni-Amers.

The Tagalas have not the flat nose and prognathous jaw so common amongst the bulk of the Nigritian tribes; their features are regular, the expression animated, while their intelligence and skill are highly spoken of. As slaves they

are much more appreciated than the Nubas, and unfortunately the occasion has often been had of comparing them from this point of view, because they are considered as the personal property of the king. This potentate is regarded as a sort of deity, whom they approach only by crawling on the stomach and scratching the ground with the left hand. No one marries without the permission of the king, and no one can remain free if it pleases the king to sell him as a slave. The father has also the legal right to get rid of his children, and in times of famine the slave-hunters go on purchasing expeditions from village to village. The Mohammedan religion, which has recently been adopted by the country, has not yet triumphed over the ancient customs.

The Tagalas valiantly resisted the Egyptians, who would never have succeeded in taking the natural stronghold occupied by these mountaineers had not disputes as to the succession to the throne opened a way to the invaders. On the plateau of the Tagala here and there rise steep hills, each bearing on its crest a small village surrounded by walls and thorny shrubs. These villages form the acropolis of the commune; subterranean routes, excavated in the rock and communicating with the outside by concealed passages, receive the provisions, and occasionally serve as places of refuge to the inhabitants. In order to give an idea of the large number of fortified villages inhabited by the Tagalas, their country is said to possess no less than nine hundred and ninety mountains, whilst one thousand are attributed to the more extensive country of the Nubas.

The Tagala district might under a settled government become the richest in Kordofân; its soil is fertile and relatively well-watered; its inhabitants are skilful, and almost the only people in Kordofân who have succeeded in cultivating the steep slopes by means of terraces sustained by walls of loose stones. The low mountain range of Wadelka, to the south-east of the Tagala hills, is also surrounded by regular terraces, like the advanced spurs of the Alps, above the plain of Lombardy.

The Tagalas, extremely skilful smiths, import iron to manufacture arms and implements; but the deposits of copper which exist in their mountains are still less worked than the auriferous sands of the country of the Nubas. The gold of Kordofân is not so much appreciated as that of Fazogl, on account of its colour.

THE KABABISH AND BAGGÂRA TRIBES.

The cultivated regions of Kordofân are everywhere surrounded by nomad populations, known under the general name of Bedouins, and divided into two main groups of tribes, to the north the Kababish or "Goatherds," to the south the Baggâra or "Cowherds." These names, which merely indicate the pursuits and the mode of life of the tribes, do not imply any difference of race, and perhaps both the Kababish and Baggâra belong to one and the same ethnical stock; according to Brun-Rollet, the Baggarâs give themselves the name of Gema. The differences in soil and climate have had much to do with the difference in their

pursuits. The goat and the camel flourish in the generally arid northern plains, while horned cattle can obtain sufficient water only in the southern steppes.

All the "Bedouins" of Kordofân claim to be of Arab origin, and do in fact speak the language of the Prophet; but, as Munzinger remarks, "speech is merely of secondary importance in ethnology, it is the manner in which it is spoken which makes it characteristic." Now of all the "Arabs" of the Nilotic regions, the Baggâra, and after them the Kababish, are those whose pronunciation differs the most from that of the true Arabs. A large number of the usual sounds in the classical tongue are unknown and replaced by other sounds, possibly inherited from a now extinct language.

The Kababish, who are more civilised, thanks to their geographical position, have other occupations besides goat and camel-breeding; they also cultivate the soil in the lowlands which fringe the Nile, and found permanent villages there, and as they are careful purveyors, they accompany the caravans from El-Obeïd to the stations on the Nile. Some of the Kababish tribes wear enormous hats, similar to those worn by the Kabyles of Tunis and Algeria. The employments of the Baggâra consist of grazing their cattle, hunting the elephant, the buffalo, and other large game, and even occasionally man. Directly the pasturages no longer offer sufficient nourishment for their herds, or when the gadfly attacks the cattle, they strike their *fergan* or tents, load the oxen with the mats which form them, and, followed by a band of their ferocious little dogs, they migrate to another part of the steppe. Carlo Piaggia met one of these caravans of Baggâra nomads which extended for a distance of two miles; including men and animals, it comprised at least fifty thousand individuals, whilst birds, as if drawn there by the column of air displaced by the caravan, wheeled in thousands round the animals, destroying the parasites with which they were infested.

Most of the Baggâra have a red skin like that of the American Indians, and in bodily beauty, athletic form of the chest and shoulders, elegance of their hands and feet, they have but few rivals in the world. Their costume is similar to that of the Kordofân villagers, their garment consisting of a kind of white shirt striped with red, which leaves the right arm uncovered; they adorn themselves with glass trinkets, rings, and articles of ivory and horn. The women still dress their hair in the ancient fashion represented on the Egyptian monuments, and their tresses, which fall half-way down the forehead and on both sides down to the shoulders, are plastered with butter and aromatic pomades. The gilded ring which many women pass through the nostrils is often connected with a chain hung behind their hair. The men carry the lance, in the use of which they are very skilful, and the European weapons, Solingen swords and Liège rifles, have already become generally adopted by them. Few Arabs are so warlike, or so scrupulous in observing the duties of the vendetta, as the Baggâra.

The Baggâra are amongst the most fervent of the faithful, and, under the direction of the Mahdi, they have eagerly thrown themselves into the holy war; they have many times crossed the Bahr-el-Arab to attack the Negro populations of the zeriba region, and towards the end of 1884, the date of the last news

received, the result of the war was still uncertain. In any case Islam, whilst spreading from Kordofân towards the surrounding countries, is far from having accomplished its mission in Kordofân itself, where numerous practices forbidden by the Prophet are still observed. For the natives the principal difference between paganism and Mohammedanism is that, in the former case, the amulet is a morsel of horn or rag, whilst in the latter it consists of a pouch enclosing a verse from the Koran or a prayer written by a fakih.

SOCIAL USAGES.

Temporary marriages are practised throughout Kordofân; even at El-Obeïd the custom of the "fourth free," which is specially attributed to the Hassanieh, is said to exist amongst several families of other tribes. Polyandry, regulated for each of the husbands by a partial purchase of the women, would appear to be an extremely common institution.

Amongst the Ghodiats of the plains and the Joama Arabs, no young girl has the right to marry till she has presented her brother or uncle with a child, the son of an unknown father, destined to serve as a slave to the head of the family. Amongst other tribes, the women belong only to the strongest or to the one who can endure the most. A day is fixed for the young men who dispute for the possession of the girl to assemble before the old men and the women armed with kurbashes, and those who bear the greatest number of blows without flinching are judged worthy to obtain the prize. At other times two of the rivals lie prostrate on the ground, one to the right the other to the left of the young girl, who, her elbows armed with knives, rests with all the weight of her body on the naked thighs of the young men. He who submits the most gallantly to these fearful wounds becomes the fortunate husband, and the wife's first care is to staunch the fearful gash that she has made.

Several other customs bear witness to the barbarous energy of these "Arabs" of Kordofân and Dar-Fôr. Often when an old man feels his end approaching he quits the dwelling-place without telling his friends, makes his religious ablutions in the desert sand, excavates a pit, and wrapping himself in his shroud, lies down with his feet turned towards Mecca. He looks to the sun and then, veiling his face, waits till the evening breeze shall blow the sand over his grave. Perhaps the hyænas commence to gnaw his limbs before he has breathed his last; but he will die without complaining, for the object of his existence is accomplished.

TOPOGRAPHY—EL-OBEÏD.

El-Obeïd, or *Lobeït* as it is called by all the natives, capital of the province of Kordofân, and the first Mahdi's residence till the beginning of 1885, occupies precisely a situation which presents all the conditions necessary for the establishment of a large city. Should it be again destroyed, as it was in 1821 at the period of the arrival of the Turks, it would spring up on the same site or in the

immediate vicinity with renewed life. El-Obeïd is built in one of the parts of Kordofân where the rainfall is most abundant; the heat there is also less over-

Fig. 87.—EL-OBEÏD.

Scale 1 : 20,000.



powering than elsewhere, since the town lies at a height of 2,030 feet, although there are no mountains to be scaled before reaching its basin.

In this region the mountains, either isolated or disposed in parallel ridges, leave the way open in every direction, and the caravans converge there without meeting with any obstacles. To the west of the Nile El-Obeïd is the first station where the caravans rest and reform on the way to Dar-Fôr, Wadaï, and Western

Africa. Its principal relations are not with Khartum, but with the villages situated at the end of the great bend which the river describes above Dongola. As the cataracts of the Nile greatly increase the cost of transport, it is in the interest of the caravans coming from Egypt to follow the desert route south-east towards Khartum and south towards El-Obeïd. In both of these towns, articles of European manufacture commanded the same market price before the rising of Kordofân. The trade of El-Obeïd was then very considerable, especially the sale of slaves who, according to Munzinger, form three-fourths of the population of Kordofân. Like the European cottons consigned to the western countries, nearly all the ostrich feathers imported from Fôr pass through El-Obeïd. The exportation of gums in 1880 was valued at 100,000 cwt., which is equivalent to a sum of £80,000.*

Should El-Obeïd lose this trade, wherein lay its importance, what would become of this capital of Kordofân, even were it to be chosen as the capital of a new empire under any of the rival Mahdis? However, ever since the destruction of the Egyptian army the isolation of the town has not been so great as might be supposed, and relations with Tripoli have been actively carried on through Wadaï and Fezzan; but the Europeans have not played their usual rôle as the intermediaries in this revived commerce.

El-Obeïd does not offer the appearance of a compact city; it is rather a collection of villages relieved here and there by brick buildings erected in the "Christian style." Around the southern quarter, which is the town properly so-called, nearly all the dwellings are mere tokuls, like those of the country hamlets—huts of earth, which collapse under a heavy shower of rain, or else cabins of mats or branches, surrounded by thorny hedges to prevent the camels from gnawing the cloths and ropes which are placed on the houses.

The populations of various origin are distributed throughout the different quarters according to their ethnical affinities. Here are settled the Jalin or Danagla merchants; farther on reside the Nubas, the Takruri, the immigrants of Fôr and the Maugrabins, whilst before the war four or five hundred Greeks had their shops in the centre of the southern quarter. A few gardens skirt the kheran, or sandy river-beds, which intersect the town, and which are sometimes flooded; but nearly all the cabins are surrounded by fields of dokhn.

During the dry seasons nothing but dusty spaces intervene between the huts, and the town presents a dreary appearance; but towards the end of the kharif, when the vegetation is in its beauty, the outlying quarters of El-Obeïd appear like vast prairies, and the conic roofs of the tokuls are hardly visible above the floating sea of red-eared dokhn. Before the war the population of El-Obeïd, including the suburban villages, was calculated at 30,000 persons. An Italian traveller even ventures to raise the number to 100,000; but it is probable that the capital of Kordofân has become almost abandoned since the first Mahdi ordered the people, under pain of death, to quit their brick houses and dwell either in the tent or in

* Trade of Kordofân, according to Prout, in 1876: Imports, £50 000; Exports, £132,000. Total, £182,000.

huts of branches, so that no exterior signs might bear witness to inequality amongst the Mussulmans, all "sons of the same father."

In the spring of the year 1885 the report reached Europe that El-Obeïd had been burnt and plundered, the booty being carried away to Jebel-Dehr by Nowal, an Arab sheikh who had never submitted to the first Mahdi. Then came the news that a second or rival Mahdi, Muley Hassan Ali, made a triumphant entry into the capital of Kordofân on March 12th, 1885. He bore a sword in his hand, rode on a white horse, and was followed by derwishes, by prisoners, and by his adherents with drawn swords. When he passed the people kissed the ground, and during his stay in the mosque a large pile was made, upon which a copy of the other Mahdi's Koran was burnt. The new Mahdi told the assembled multitudes that Mahommed had given him a sword wherewith to extirpate the "false" Mahdi and all his followers. Since then it appears that the forces of the rival Mahdis have met on the battlefield, and that the original Mahdi was defeated with great slaughter and driven out of Kordofân.

ABU-HARAZ—MELBEÏS.

To the south-west of El-Obeïd is *Abu-Haraz*, a somewhat important group of hamlets, situated in a large wooded valley, in the midst of gardens surrounded by quickset hedges. *Melbeïs*, another town, is built in a depression near a morass occasionally flooded by the torrents which descend from Mount Kordofân. In the vicinity of this town, on the banks of the Khôr Kashgil, a tributary of the Abû-Hableh, is the spot where was fought in 1883 the decisive battle which put an end to the Egyptian rule by exterminating an army of eleven thousand men. At the same time the Europeans lost much of their prestige in the eyes of the natives, because the commander of the Egyptian troops was General Hicks, an Englishman, and the bulk of his officers had been selected from the British army. Throughout the whole of the Nile basin it was repeated from tribe to tribe that England had been conquered by the Mahdi, and that the cannons of the "Infidels" had thundered in vain against the warriors sent by God.

BARA—KAÏMAR—EL-SAFI.

The main caravan routes in Kordofân were till recently skirted by the telegraph, which was much dreaded by the natives; many of them hardly dared to speak when near the wires, lest their voices might be heard at Khartum or in Egypt.

To the north of El-Obeïd, the principal town, situated on the caravan route between Kordofân and the bend described by the Nile at Dabbeh, is *Bara*, founded by the Danagla merchants. Under the rule of the Dar-Fôr people before the invasion of the Egyptians, this market-town was very prosperous; at that time, according to tradition, "all the Bara women wore earrings of gold and bracelets and hair-pins of gold and silver." Near Bara was fought in 1821 the battle

which procured Kordofân for the Egyptians, and which revenged, after a course of two generations, the still more terrible battle of Kashgil.

One of the stations on the route between Bara and Dabbeh is the oasis of *Kāimar*, or Kajmar, where there is a small intermittent lake full of salt water; but the wells in the vicinity furnish fresh water nearly as good as that of the Nile. In the vicinity, on the Jebel-Haraza, Lejean has seen a rock covered with curious paintings, which probably represent a razzia. One of the figures is represented of a gigantic stature, the beard cut to a point, and wearing a costume similar to that used by the Franks during the First Crusade.

Beyond this point, on the route to Dabbeh, lies the oasis of *Es-Safi*, which, thanks to its magnificent vegetation, is one of the most beautiful in all Africa. Although not permanently inhabited it may be considered as the centre of the Kababish nation, who cultivate the soil and water their cattle at its streams. At the period of Cuny's visit, at least fifteen thousand camels were grazed in the district surrounding Lake Es-Safi. The water, which probably filters from the Nile through the sand or subterranean rocks, covers a vast space, and is dotted with islands. During the rainy season the trees on the banks are partly submerged by the rising waters. Flocks of ducks and geese swim on the surface of the lake, whilst its banks are lined with waterfowl—storks, herons, ibis, secretaries, and pelicans.





CHAPTER X.

DAR-FÔR.



AR-FÔR, or the "Country of Fôr," more commonly called Darfur, by fusing the two words in a similar fashion to that in which the French say "Angleterre," instead of "Pays des Anglais," is the region which stretches west of Kordofân on the route to the river Niger. Dar-Fôr does not entirely belong to the Nile basin.

Its western slope, which has as yet been explored but by few travellers, appears to lose its waters in depressions with no outlet; but if the rainfall were sufficiently abundant the wadies of this region, changed into permanent watercourses, would ultimately reach Lake Tsad.

The streams draining in the direction of the Nile also run dry in the plains, except in the season of the kharif, when the streamlets rising in the southern part of Mount Marrah fall into the Bahr-el-Arab. Wady-Melek, or Wed-el-Mek, that is to say the "Royal Valley," also called Wady-Mas-Sûl, which runs to the north-east of Dar-Fôr towards the great bend of the Nile, is also flooded with water during rainy years, possibly for ten or fifteen days together; but it never reaches the Nile, its mouth being blocked by shifting sands. The enormous fluvial bed, nearly always dry, might roll down a volume equal to that of the Rhône or the Rhine. Its sandstone or limestone cliffs, here and there interrupted by lava streams, are from 3 to 30 miles apart, whilst the hollows are filled with trees, which form a continuous line like a band of verdure in the midst of the desert.

The eastern half of Dar-Fôr, belonging to the Nile basin, is the most important part from a political point of view, probably on account of the commercial attraction exercised by the Nilotic towns, and because, in the neighbourhood of the mountains, where water is more plentiful, the people naturally settle down in larger numbers. In this respect Dar-Fôr is a second Kordofân, but on a much larger scale. Around a central district dotted with settled villages stretches the zone of the wilderness and grassy savannahs.

A country of this description can scarcely have any fixed boundaries; here camps, wells, clumps of acacias or brushwood, and bleached bones are the signs by which the traveller knows he is crossing from one district into another. As far as

can be judged, without attempting an at present impossible approximation, the area of Dar-Fôr and its dependencies may be estimated at 200,000 square miles. This extent of country is bounded to the north by the desert, east by Kordofân, south by the Bahr-el-Arab, and west by Wadaï, whilst its total populations, according to Nachtigal, amounts to at least 4,000,000. Mason, however, who has also visited this country, thinks that the population does not exceed one million and a half.

PROGRESS OF DISCOVERY.

Dar-Fôr, whose capital is more than 360 miles from the Nile in a straight line, is too far removed from this great commercial route to have been frequently visited. It was not known even at the end of the last century except by name, and it was then that it entered for the first time into the history of geography, thanks to the voyage of the Englishman, Brown, who remained in the country three years, although rather as a captive than a free man.* An Arab, Mohammed el Tunsy, or the "Tunisian," dwelt still longer in Dar-Fôr, and wrote a very interesting work upon it, which has since been translated into French. It is still the only book which contains the fullest and most valuable account of the history, manners, and customs of the Dar-Fôrians.

The Frenchman Cuny in 1858 presented himself at the court of El-Fasher, but he mysteriously died there a few days after his arrival, and not even his diary from El-Obeïd to El-Fasher has been preserved. The sovereign of Dar-Fôr had doubtless wished to act up to the name bestowed on his country, "the mouse-trap of Infidels," who, it is said, "can easily come in, but never get out again."

It was to Nachtigal, the third European visitor, that fell the honour of describing, for the first time during this century, the interior of a country hitherto so little known. This explorer was still in Dar-Fôr when the slave-dealer Zibehr commenced its conquest, which was soon afterwards achieved in the name of the Egyptian Government. The country was opened to travellers, and the European staff officers were able to draw up a map of it; but the Egyptian occupation has not even lasted ten years. The governor nominated by the Khedive is a prisoner of the insurgent Mussulmans, and the frontier of Dar-Fôr is again forbidden to explorers for a time.

PHYSICAL FEATURES.

More truthfully than to most other countries the expression "backbone" may be applied to the mountain system of Dar-Fôr. Here almost more than elsewhere the whole living organism—streams, plants, animals, man himself and his history—are attached to the main ranges as to the bones of a skeleton. Without the mountains of Marrah there would be no Dar-Fôr. This chain of lavas and granites, whose general shape is that of a crescent, commences north of the fourteenth degree of latitude, and after running southwards for a distance of about 120 miles, sweeps round to the west. At the point where Nachtigal crossed it, towards its northern

* W. G. Brown, "Travels in Africa," 1799.

extremity, it bears the name of Kerakeri, which signifies "rubbish," or "rabbit-burrow," which term has been procured for it by the thousands of crumbling blocks covering its slopes.

At the highest point, which is crossed by the route from Wadaï to El-Fasher, Nachtigal determined an approximate height of 3,553 feet, which the neighbouring summits exceed by from 500 to 1,000 feet. During their short occupation of the country the officers of the Egyptian army, notably Mason, Purdy, and Messedaglia, partially explored the interior of the uplands, measuring some of the crests which overlook the rest of the lofty granite masses. One of them, that of Tura,

Fig. 88.—CENTRAL REGION OF DAR-FÔH.

Scale 1 : 4,400,000.



in the northern part of the chain, rises to a height of 4,800 feet. According to Mason, the culminating point of the Marrah range attains an altitude of 6,100 feet, or about 2,660 feet above the low-lying plains of Dar-Fôr. The rocks of Marrah contain numerous caverns, several of which formerly served as prisons, some for the sons of princes, others for the viziers.

To the north and south are secondary chains and isolated masses like those of Kordofân. Such are the superb Gurger Mountains to the north-west, and the Jebel-Si, standing quite alone in the plain and terminated by an enormous crag in the shape of a throne. A village is perched round these escarpments, protected by

a circular enclosure. In the more remote regions of central Dar-Fôr are also a few isolated uplands. The confines of Wadaï, towards the north-west angle of Dar-Fôr, are indicated from afar by the Jebel-Abû-Ahraz, or the "Mountain of the Father of the Acacias." A second height, better known, as it commands the caravan route from Kobeh to Siut to the west, develops its peaks, such as the Jebel-Dor and the Jebel-Anka, in a line with the northern continuation of the main axis of the Marrah range.

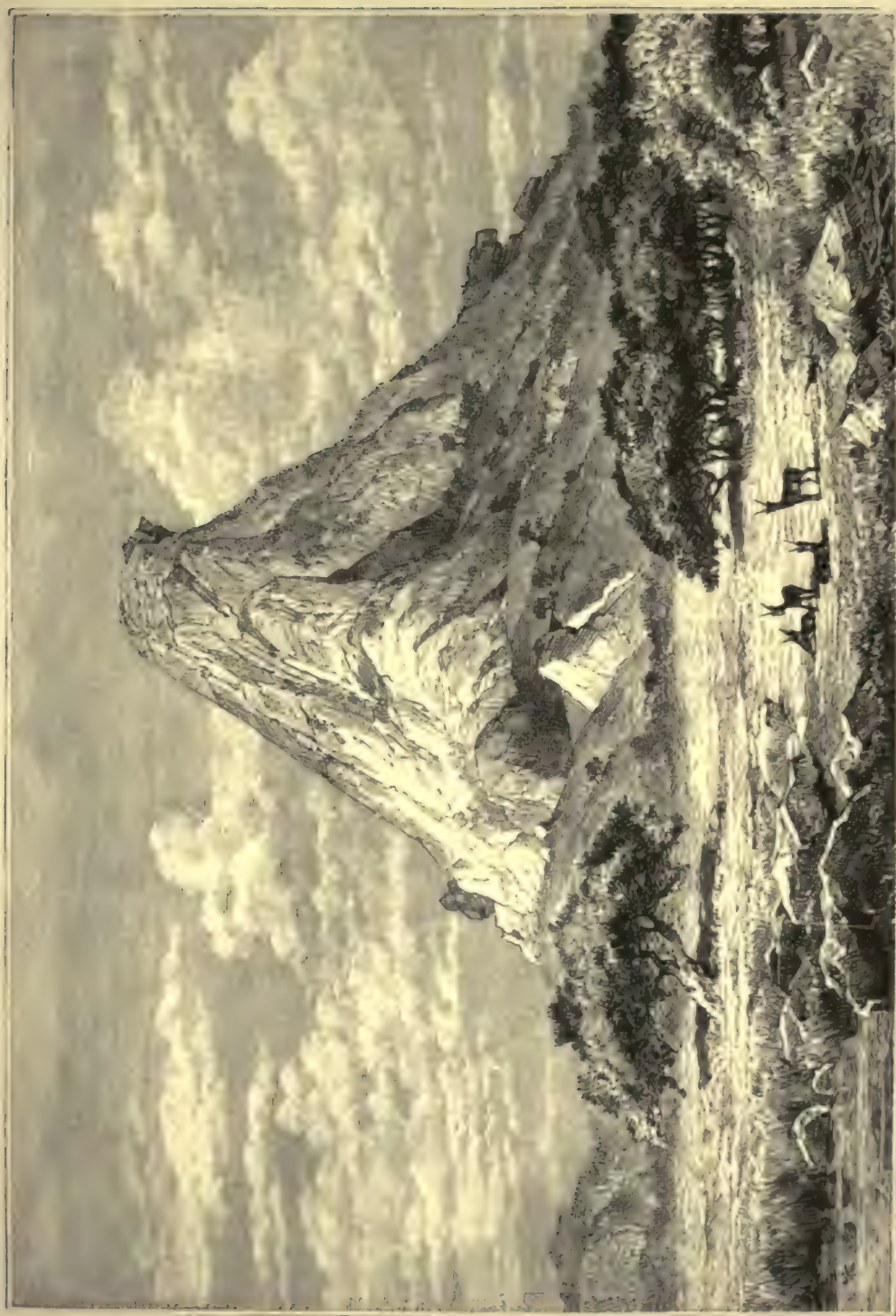
To the north-east of Dar-Fôr, the Jebel-Medob lifts its sandstone walls and granite cupolas, here and there broken by lava streams, to a height of nearly 4,000 feet. Beyond this point extends the plateau of the Jebel-Ain, skirted by the Wady-Melek. To the east the Jebel-el-Hillet, which is skirted by the route from El-Fasher to El-Obeïd, and to the south, in the hydrographic basin of the Bahr-el-Arab, are still several other isolated uplands, connected by no intermediate ridges with the Marrah highlands. The Jebel-Hadid, one of these groups of hills, is very rich in iron ores. Some 30 miles to the south-west of the Jebel-Dango, another mountain mass rising above a plain, are the copper-mines of Hofrah, celebrated throughout the whole of central Africa. The mineral vein which is now being worked lies on the right bank of the Bahr-el-Fertit, an affluent of the Bahr-el-Arab. An excavation, 500 feet long by 50 feet broad, with a mean depth of 10 feet, has been dug out by the miners, and shafts, now abandoned, have been sunk in all directions within a radius of 1,660 feet from the pit. It was mainly with a view to obtain these copper-mines that the Khedive caused Dar-Fôr to be occupied. Few other regions have been the cause of more wars between the African populations than these now valueless mineral beds.

HYDROGRAPHIC SYSTEM.

The rainfall and the waters of the wadies are regulated by the atmospheric currents, as in Kordofân; however, it would appear that the higher mean elevation and the greater extent of the Dar-Fôr highlands cause more of the rain-bearing winds to be arrested, thus securing a more copious rainfall for this region.

Near the centre of this mountainous district, in a closed amphitheatre, lies a lake which has never yet been visited by European travellers.

The rains are more abundant in the western region of Dar-Fôr; and as the concave side of the crescent-shaped Marrah range faces westwards, the water-courses of this watershed all converge on the main branch, the Wady-Azum, a relatively copious stream, although its bed is dry for a portion of the year. On the convex slope of the Marrah Mountains the running waters, diverging east and southwards, become lost in the desert, and hence are unable to unite their sandy beds in one common hydrographic system. On the southern slope alone, where the rains fall more frequently, the rivers have a longer course and constitute veritable fluvial basins. Thus, during the rainy season, the Wady-Amor and the Wady-el-Kô combine to fill a rahad or lake of some considerable size, at which the Rizegat Baggâras water their cattle.



JEBEL-AIN



Farther westwards, other wadies send down during the kharif a sufficient volume to cause the floods to spread out into vast temporary lakes, in which the dunes and argillaceous hills appear like islands. Here and there are even some lakes in the steppe, such as Lake Taïmo, in which water is found at the height of the dry season. Nevertheless Wilson and Felkin state that at *Shekka*, during the dry months, the people use the juice of the water-melon instead of water for household purposes, and that the cattle have scarcely any other liquid to drink. The upper Bahr-el-Arab, which receives the surplus of all the wadies of southern Dar-Fôr, is flooded throughout the year, and in the Bahr-el-Fertit, a northern affluent of the Bahr-el-Arab, water is always to be obtained at a depth of a few inches below the surface. The fish take refuge in the deep pools excavated by the current at the base of the rocks, and the river is said to be navigable during the kharif. The southern region, which is often flooded, is the least healthy, whilst that of the north, being drier, and at the same time lying at a higher elevation, is generally salubrious.

FLORA.

The flora of Dar-Fôr is identical with that of Kordofân, at least in the region which is not watered by the affluents of the Bahr-el-Arab. The plants and wild beasts, as well as the cultivated species of the domestic animals, differ in no respect in the two regions. The same living forms and products are to be found in the corresponding climatic zones; however, the western region of Dar-Fôr, where water is more abundant, and the layer of vegetable humus thicker, is by far the richest in variety of species.

In both countries, woods and groves are found only on the banks of the wadies, the intermediary tracts presenting the appearance of a steppe or even a desert. Acacias, tamarisks and sycamores are the commonest varieties of trees. The baobab, which in Dar-Fôr is also used as a reservoir during the dry season, finds its northern limit towards the middle of the country. In the mountains the branching euphorbias recall the flora of the Abyssinian plateau; here are also found cedars, orange-trees, citrons and pomegranates, which reminded the Italian Messedaglia of his country. Before the war, the fruit of the tamarisk, kneaded into small cakes, was exported to Nubia and Egypt. One of the most valuable trees is the higlik (*balanites Egyptiaca*), whose fruit, neglected in the zeriba region, is used as an aliment by the Forians. The fruit, made into a paste with pounded roots, is also used as soap, whilst the young leaves and shoots make an excellent seasoning. The ashes yield a kind of pickle, also employed in their diet, and its wood burns without giving out smoke. Thus the higlik is to the Forians what the date is to the Egyptians. The palm is rarely seen, although the western districts possess the wine palm (*raphia cinifera*). Dar-Fôr and Kordofân are comprised between two zones of vegetation, to the north that of the date, and to the south that of the deleb palm.

FAUNA.

The southern part of Dar-Fôr also forms the northern boundary of the forest zone, which, however, thanks to the rains, encroaches towards the north on the basin of the Bahr-el-Arab. Here stretch the dense forests of El-Hallah, frequented by the elephant, rhinoceros, giraffe, and buffalo, which are chased by the Baggâra hunters of the Kambanieh or Habanieh tribe. The ostrich, and various species of antelope, are also found in large numbers in the surrounding steppes; but the plains of the northern provinces are the favourite resort of the ostrich hunters, and the finest feathers are procured from this region.

In the vast steppes which intervene between Kordofân and Dar-Fôr, the nomad pastors engage twice yearly, before and after the rainy season, in a general battue. All the domestic animals of the tribe, such as the camels, horses and oxen, used as mounts or beasts of burden, are brought into requisition and driven to the hunting-ground, where the beaters spread out into a circle so as to drive the game towards the entrance of a narrow passage strewn with traps and well guarded at the outlet. Horsemen then fall upon the captive animals and massacre them before they have time to destroy or free themselves from the traps. Occasionally as many as three hundred large animals—antelopes, gnus, and buffaloes—are thus obtained in one day, and the tribe are in this way enabled to pay the arrears of their taxes. In the southern region of Dar-Fôr, the *ardha*, or white ants, exist in such numerous colonies that whole forests are destroyed by them. In times of want the natives eat these termites, mixed with the fruit of the tamarind. After sunset they light fires before the pyramidal hills of the “white ants,” who rush out in thousands, and thus whole boxes are packed with them “like the boxes of currants in Greece.”

INHABITANTS OF DAR-FÔR.

The race of “pure Forians,” as Mohammed the Tunisian called them, occupy the mountainous region in the centre of the country. As far as can be judged by the meagre reports on the tribes that have been studied by travellers, they are Nigritians of a dark brown complexion, the nose flat and the forehead low and receding. They are divided into several groups, of which the most important are the Kunjara, who till recently ruled over the country, and governed Kordofân before the arrival of the Egyptians. Although considered as Nas-el-Belid, or a “stupid people,” the Forians have at least this advantage, that they lack the cruelty and avarice of their neighbours. Under their rule the people of Kordofân increased and prospered, whereas they have become impoverished and have decreased since the departure of the Kunjaras. The Kunjara language, which after Arabic is that most generally spoken in Dar-Fôr, is said probably to belong to the Nubian group. But Lepsius has discovered that there are essential differences between the speech of the Nubas and that of the Kunjaras.

The Massabat nomads, who are found in the plains between Dar-Fôr and Kordofân, are also said to be of Forian race, although they are now assimilated to

the Arabs in speech. There are moreover numerous other communities, whose classification is a matter of great difficulty. All call themselves Arabs, so as to appear of more noble extraction; but the bulk of them are probably allied to the Forians. The powerful Massalit tribes, several of which live in complete independence on the western frontiers of Dar-För and in Wadaï, are amongst those tribes believed to be of aboriginal descent. Till recently they were in constant feud with the Habanieh tribe, who occupy more especially the southern region of Dar-För; but peace has now been restored. According to Nachtigal, some of these people are still addicted to anthropophagy.

THE ARABS OF DAR-FÖR.

The northern part of the country, on the verge of the desert between Kordofân and Wadaï, is peopled by Barâbra immigrants, Zogawahs, Bideyats, and many others, and even by Bisharins from Eastern Nubia. There are numerous Wadaï colonies in Dar-För which, like the other natives of the western countries, are generally known by the name of Takrur or Takarir. Dar-För has also been colonised by Fulas, belonging to the same race as those of Western Africa, and by Homrs, Hamrs, or Beni-Hamrans, who possess many camels, and who claim to have come from Marocco. They live principally to the north-east of the Marrah Mountains, in the Om-Bedr oasis, and to the west in the Wady-Bareh, where they practice sorcery; some of their families have even penetrated as far as Kordofân. According to Ensor, the Homrs are distinguished from the other inhabitants of Dar-För by the respect which they show to their wives. The majority of the strangers consist of Arabs, or of "peoples assimilated to the Arabs," who have come from the north and east. Already some centuries ago, and probably even at a period anterior to the Hegira, nomads from the Arabian peninsula had penetrated into Dar-För. The Tunjur or Tunzer, who governed the country and whose descendants still live in the mountains and plains situated south of El-Fasher, claim to be Arabs and are considered as such, although they are not Mohammedans, and although the peoples in these countries are usually classed according to their religion. In the opinion of Lejean they are not Arabs, but Tubbu tribes who have migrated from the north-west. The Mussulman "Arabs" also, who roam in the plains, divided into numerous groups, are evidently of mixed origin, like those of Kordofân, whom they resemble in customs and speech. In southern Dar-För all the tribes belong to the great Baggâra family. According to Mohammed the Tunisian, children born of mixed Arab and För parents die at an early age, whilst those born of parents of the same race are usually of sound and vigorous constitution. Consumption is extremely rare amongst them, and this malady is almost unknown elsewhere in Dar-För.

SOCIAL USAGES.

The civilisation of the Forians is of Mussulman origin, and the Arabs have evidently been the instructors of the nation. Literature and science, if these two

terms can be used in connection with a people who have scarcely emerged from barbarism, are reduced to a study of the Koran. A few magical practices, probably of African origin, are mingled with the Arab traditions; and even during this century human sacrifices were made at the chief royal ceremonies. On the accession of every sovereign, and on other occasions, two young brothers were sacrificed with great pomp, and the king with his high functionaries feasted on their flesh.

Agriculture is still in a very rudimentary state, their plough consisting of a kind of hoe which a man drags after him. But this occupation is, nevertheless, highly honoured. Formerly the sultan of Dar-Fôr, like the king of the Funj in Senâr, the emperor of China, and other sovereigns, was extremely proud of being the first sower in his kingdom. After the rains he went forth in great pomp, accompanied by the State dignitaries and a hundred young and handsome women, and cast the seed into a prepared field, all the courtiers imitating him. Then the people sowed in their turn each in his own field, and when the harvest recompensed his toil, the faithful subject offered up his homage to the "royal farmer."

Nearly all the mountain region is perfectly cultivated in terraces, and produces cereals and cotton. But according to Ensor, at most a hundredth part of the arable lands on the plains has been reclaimed. Industries in Dar-Fôr are still in a very undeveloped state, except those of brickwork and pottery. But the cotton stuffs that are woven in the tents are very durable and much sought after. By the natives they are even preferred to those sold by the Dongola merchants, which are of European or American manufacture. These latter are generally used as money, but salt bricks are also employed as a means of exchange.

COMMERCIAL RELATIONS.

Since the annexation of Dar-Fôr to the vast Egyptian possessions, commercial relations had become frequent with the Nile. The caravans frequently journeyed between the river and El-Fasher by the market-towns of Kordofân, or else directly towards Dabbeh, on the great bend of the river. Since 1875 the Egyptian Government has even projected a future line of railway following the natural route offered by the bed of the Wady-Melek, which is generally shunned by the caravans on account of the danger of attack from marauders. Before the Egyptian conquest, nearly all the traffic of Dar-Fôr with the rest of the world was conducted by the medium of the "great caravan," which was increased by numerous smaller "kafilahs," setting out from the banks of the Tsad and Niger.

Every year, or else every two or three years, according to the political situation and the state of the markets, the Takrur pilgrims banded themselves together into a kafilah in northern Dar-Fôr, and the merchants combined with them in order to take part at once in this pious duty and in a profitable work. The great caravan consisted occasionally of some thousands of persons and fifteen thousand camels. This moving army, which none of the pillaging steppe tribes dared to attack, did

not take the direction of Khartum, or even that of the Nubian Nile. Guided by the stars, the sun, and old beaten paths, it marched from station to station in a northerly direction, attaining the Nile at Siut. Like the caravan of Kordofân, it had its particular route, wells, and oases, and hence did not run the risk of having to fight for the possession of the water gushing forth here and there in the desert. Moreover it was split up into several sections, which followed each other at a few days' interval, so as to give the water time to collect again at the bottom of the wells.

Some caravans, compelled to move rapidly, completed the journey in forty-five days; but they usually rested at the stations and in the oases, and did not arrive in the valley of the Nile till after a journey of two or three months. Bearing the valuable products of central Africa—ivory, ostrich feathers, gum, tamarinds, skins of wild beasts, and rhinoceros horns, to which were added slaves, eunuchs and the bulk of the camels of the caravan—the merchants usually remained about six months in Egypt, awaiting the return of the pilgrims from Mecca. They then set out on their return journey to Dar-Fôr laden with woollen goods, pearls, glass trinkets, and chased weapons, articles light of weight but of great value, for the transport of which they did not require such a long convoy of animals. At the time of the French expedition into Egypt, General Bonaparte, desiring to open up relations with the Sultan of Dar-Fôr by means of these caravans, asked him to send in exchange for his merchandise, "two thousand black slaves, over sixteen years of age, strong and vigorous."

TOPOGRAPHY.

Dar-Fôr is naturally divided into a central province, that of the mountainous region, from which the watercourses descend, and where the masters of the country have nearly always resided, and into the provinces of the surrounding lands, including the region of the steppes. The *dâr* or central region, which comprises the highlands, is known by the name of *Torra*; the others are termed according to their geographical situation, Dâr-Tokonavi or "the north," Dali or "the east," Uma or "the south," Dima or "the south-west," and El-Gharb or "the west." Moreover, all the well-defined geographical regions bear the name of *dâr* or "country," independently of the political or administrative divisions.

EL-FASHER—KOBEB—TORA.

The present *Fasher*, that is to say the "Residence," is situated at a height of 2,456 feet on the eastern slope of Dar-Fôr, between two sandy hills, and on the edge of the Tendelti lakelet, which is fed by a wady descending from the northern Marrah hills. Its current, being retained by a dyke, supplies the inhabitants with water for more than half of the year; however, before the rainy season the bed of the lake has to be excavated to a depth of over 30 feet before drinking water can be procured. El-Fasher lies nearly midway between the capitals of

Kordofân and Wadaï, on the regular caravan route. It is not the largest town in the country, being merely a group of clay huts thatched with straw, with, according to Ensor, a population in 1875 of merely 2,650 persons.

The principal city, which was also the "residence" towards the end of the last century, is *Kobeh*, also lying on the caravan route some 30 miles to the north-west. Of all the towns of Dar-Fôr, it is the only place which boasts of a few stone houses, a proof of the influence of a remote civilisation. These houses belong to the merchants or the heads of the caravans, and are surrounded by huts similar to those which are found in all other towns and villages of this country. Towards the end of last century, Brown estimated its population at 6,000 persons.

Omshanga, situated nearly midway between El-Fasher and El-Obeïd, at the junction of the Shekka route, is also a large town, provided with an abundance of excellent water, which is contained in wells 130 feet deep. South-west of El-Fasher, in an upland mountain valley, the town of *Tora*, *Torra*, or *Toran*, which has given its name to the central province of Fôr, is also said to be regarded as a kind of capital, and here are all the royal tombs.

Since the Egyptians have obtained possession of the country, new towns have been founded, the most important of which is *Fojeh* or *Foja*, the arrival station of the Egyptian caravans. The oasis of *Om-Bedr*, about 60 miles to the north, has no settled villages, although it is the centre of the Homr populations. At times over six thousand persons and fifty thousand camels assemble together on the temporary camping-ground.

DARA—SHEKKA—TUESHA.

Dara, in the northern region of the province, till recently enjoyed some little distinction as the residence of an Egyptian mudir or governor, and as the caravan station between Dom-Suleïman and El-Obeïd. A mere group of tokuls, it lies near the left bank of the Wady-Amur, on which also stands the village of *Menorachi*, about 60 miles farther north. Near here in 1874 was fought the decisive battle which cost King Brahim his life, and converted Dar-Fôr into an Egyptian province.

To the south-east the town of *Shekka* or *Shakka*, which still lies within the limits of the ancient kingdom of Fôr, was the chief town of the province of the Bahr-el-Ghazal, under the khedival rule. It is peopled with Jellabis or "merchants," as is also the case with a small group of villages, bearing the general name of *Kobesh*, but which is usually termed *Kalaka*, like the surrounding country. Midway between Shekka and El-Fasher, the principal caravan station is *Tuesha*, a second group of villages whose name is but too well known throughout the Mussulman world. It is a depôt for slaves, who are here generally made eunuchs before being forwarded to Egypt. The routes converging on Tuesha are covered with the bleaching bones of these unfortunate people, whom no one thinks it worth while to bury.

In its western division, beyond the Marrah Mountains, Dar-Fôr appears to

possess no groups of settled habitations deserving the name of town or village. Here it is everywhere conterminous with the powerful Mahommedan kingdom of Wadaï, with which it is connected by only one known military or caravan highway. The drainage also lies in the same direction, all the streams rising on the western slopes of the Murrah range flowing intermittently through the Batha and the Bahr-es-Salamat westwards to the basin of Lake Tsad.





CHAPTER XI.

NUBIA.



THE term *Nubia*, applied to the country which lies beyond Egypt, has no precise geographical sense; nor can any meaning be attached to it from a political or administrative point of view. It probably had once a real ethnological value, at a period when the Nubas, not yet driven back by other populations, were the only dwellers on the banks of the Nile throughout a great part of its course. But wars and invasions have for a long time modified these former conditions. At the present time the term *Nubia* is variously employed in current language. At one time it is applied merely to the region of the Wady-Nuba, which comprises that part of the river's course which is broken up by the thousand rapids of the second cataract, whilst at another it is used to designate the whole of the region bounded north by the rapids of Assuan, south by the junction of the two Niles, east by the Red Sea, and west by the trackless desert.

The natural geographical limits of Nubia, on the southern side, seem to be formed by the junction of the Nile and Atbara, and by the route from Berber to Suakin. Nubia, thus bounded in the direction of the Abyssinian plateaux, does not include any of those regions which are connected with Abyssinia, properly so-called, by their mountains, hydrographic system, or populations. Its approximate area within these limits and on the western side as far as the twenty-seventh degree of east longitude, is estimated at 100,000 square miles, with a population of about 1,000,000. According to Rüppell, the arable land of Nubia, limited by the desert, is not more than 1,300 square miles in extent, and all the inhabitants are concentrated within this fertile riverain tract.

The region, some hundreds of miles broad, which north of the Atbara and Barka separates the valley of the Nile from the Red Sea coast, is commanded by chains of heights, similar to those traversing the territory of the Hadendoas, Hallengas, and Bazens; but these chains, separated from the Abyssinian spurs by the deep breaches and by the nearly always dried-up beds of numerous wadies, constitute a special orthographic system. Whilst the Abyssinian chain, although abruptly terminated by the deep bed of the Red Sea, reappears as it were in Arabia as the Yemen uplands, the mountains of the Bisharin country develop their axis



ANNUAN, NORTH FRONTIER OF NUBIA.

parallel with the shores of the Arabian Sea. Besides, known under different names at each of their several sections, they extend for a distance of over 600 miles to the very gates of Cairo. It is the Egyptian part of this long ridge which takes the name of the "Arabian" range, because the riverain Nile populations see it standing out against the sky in the direction of Arabia. The Nubian Mountains, east of the Nile, are also sometimes collectively termed Etbaï, a name which is more especially reserved for a hill which rises near the coast opposite Jedda.

THE NUBIAN COAST RANGE.

The coast or border chain of Nubia between Suakin and the Ràs-Benas, north of the ancient port of Berenice, consists, like its Egyptian extension, almost entirely

Fig. 89.—MINERAL REGION OF THE ETBAI UPLANDS.

Scale 1 : 3,000,000.



of primitive rocks, such as granite, gneiss, and crystalline schist; towards the south alone the system presents extensive limestone formations. Rising gradually from the south to the north, it culminates in the Jebel-Olba, which, according to Wellsted, exceeds a height of 8,000 feet. Connected at this point with the mountains of the interior by lateral offshoots, the chain again falls in a north-westerly direction. At Mount Irba (Soturba) it attains a height of 7,010 feet, and at Mount Elba, the Etbaï properly so-called, it rises to more than 4,080 feet, that is, about the same height as the Jebel-Farageh, the Pentodactyle of the ancients, lying farther north, and which Schweinfurth vainly attempted to scale. In certain places the base of these escarpments is washed by the waters of the Red Sea,

whilst at other points the *sahel* or *tehama* of the coast is occupied by the low hills of the tertiary epoch, moving sand-hills, and coralline reefs. The pyramid-shaped islet of *Zemerjit*, which lies 60 miles off the coast in a line with the Râs-Benas headland, serves as a landmark to the vessels entering the dangerous waters of the Arabian Sea.

THE NUBIAN GOLD MINES.

The Elba Mountains merge in the interior with other heights of divers formations, in which the ancient Pharaohs worked gold and silver mines. It is certain that, during its long period of splendour, Egypt was very rich in precious metals; in this respect the monuments are in harmony with the statements of the Greek authors. Nubia appears to have furnished the greater part of the gold, and according to a tradition, to which weight is added by the heaps of rubbish and galleries hewn in the auriferous rocks and formerly inhabited caves, the principal mining centre was at Wady-Allaki, which is a series of ravines stretching away to the west of the Elba Mountains. These ravines were worked till the middle of the twelfth century of the Christian era. The Pharaohs, Ptolemies, Greek emperors, and Arab caliphs were obliged to protect their colonies of miners against the attacks of the surrounding nomad peoples, successively termed Blemmyes, Bejas, and Bisharins; but the difficulties of obtaining sufficient wood to light the mines or water for the miners were probably the greatest obstacle in the way of profitably working the mines. All the supplies from the springs of the district had been carefully husbanded, and along the ancient desert routes, above the springs, crosses surmounted by a circle are still to be seen, indicating the presence of water.

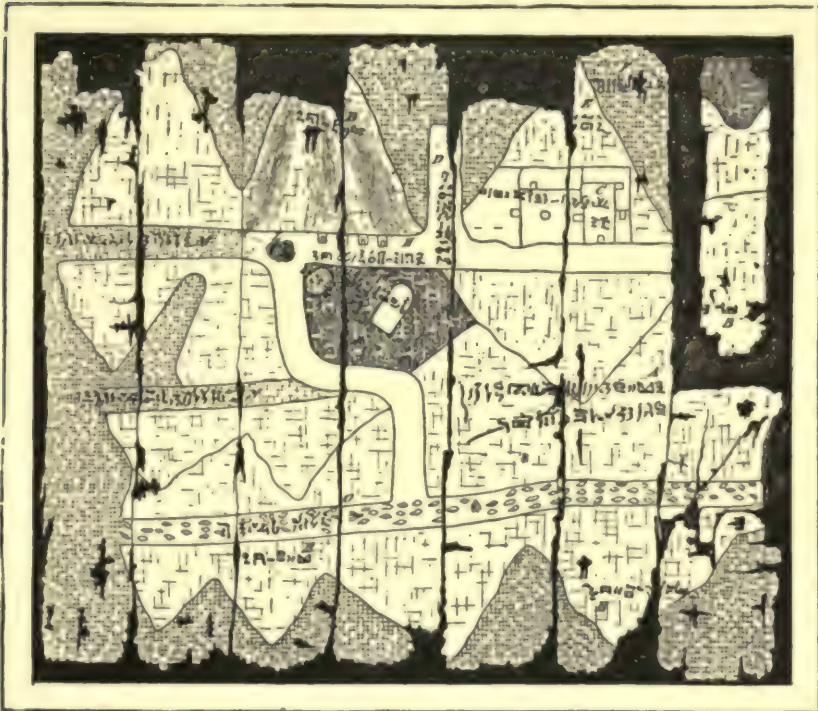
The description given by Diodorus Siculus, as well as the appearance of the galleries, shows that the gold was not collected in the sands, but extracted from the rock itself by the crushing process. This method was extremely costly, and could not now be adopted unless the mines were extremely rich, like certain Californian "placers." But the first exploration, undertaken by Linant de Bellefonds for Mohammed Ali, followed by numerous visits made by various geologists, have proved that the ancient mines of Nubia are no longer sufficiently rich to be profitably worked.

Hitherto no inscriptions or sculptures have been discovered in the mining region; however, a column found at Kuban, on the right bank of the Nile between Korosko and Assuan, and the texts of the Egyptian temple of Radesieh, built on the riverain route to the mines of Akito, shed much light on the resources of the Pharaohs. Moreover, there is in the museum of Turin a fragment of an Egyptian map, which represents a mining station with its shafts, dépôts, galleries, reservoirs, and temple of Ammon. This precious document, the oldest of its kind, since it dates from the time of Ramses II., is disposed in a way inversely to that of our maps, the east side, which is that of the Red Sea, being to the left of the sheet. It is as yet uncertain what mining district it is intended to represent.

THE CENTRAL HIGHLANDS.

To the west of the border chain which skirts the Red Sea, the mountainous ridges run transversely either from the east to the west, or from the north-east to the south-west, in the same direction as the portion of the Nile comprised between Abû-Hamed and Dabbeh. Some of these ridges are continuous; such, for instance, as that of the "Cataracts," which forms the natural barrier between Nubia and

FIG. 90.—NUBIAN GOLD MINES



From the Turin Papyrus, reproduced by Chabas.

- | | | |
|---|---------------------------------|-------------------------------|
| A. The Auriferous hills are coloured red on the plan. | D. Road to Ta Menat-ti. | K. Cistern. |
| B. Gold Mountain. | E. Face of the Mountain. | L. Wells. |
| C. Shrine of Ammon on the Holy Mountain. | F. Abode of Ammon. | M. Road to the Coast. |
| | H. Houses for Storing the Gold. | N. Another Road to the Coast. |
| | I. King Ramanem's Stele. | O. Road to Tapimat. |

Egypt, west of Assuan; such also is the range whose culminating point is the Jebel-Shikr, north-east of Abû-Hamed.

Other ridges are intersected at intervals by broad breaches, and from a distance present the appearance of walls partially crumbling away. Like the mountains of the border chain, those of the highest transversal chains consist of crystalline rocks, granites, gneiss, porphyries, syenites, diorites, and volcanic formations. In many parts of the desert occur metamorphic sandstones, which have overflowed into the crevasses in the soil. But between the mountains, which form the backbone of Eastern Nubia, are other projections of less height, nearly all isolated, although

scattered by thousands in the desert. They are small sandstone hills merely rising some 60 feet above the plain, but at some points attaining a relative elevation of 660 feet, or from 1,630 to 2,000 feet above the sea. The granite heights in the interior reach an altitude of over 2,160 feet, some of the peaks even rising to nearly 3,300 feet.

Fig. 91.—KOROSKO DESERT.

Scale 1 : 2,800,000.



The sandstone rocks of Nubia present the most diverse forms. Some stand out like regular towers, others in the form of pyramids, whilst others again, whose central portion has disappeared, resemble volcanic cones. Consisting of horizontal layers of quartzose sandstone of varying density, they offer more or less resistance in different places. In one place the summit crumbles away, elsewhere the base leaving the crest crowned as if with a table; several rocks are also pierced with openings through which light is visible. The very names that the nomads and caravan leaders give to these sandstone heights are a proof of the variety of their forms. They imagine they see in them palaces, animals, and processions of warriors. Thanks to these fantastic outlines, the guides of the caravans can always determine their whereabouts in these endless labyrinths of breaches winding between the rocks. The various colours of the stone also assist them in finding their way. Certain strata are shaded with green, yellow, pink, or blue; whilst others, in which ferruginous sands predominate, are of a brilliant red. Jasper, chalcedony, and siliceous crystals are embedded in the walls. But on each journey the guide finds some changes. The sands produced by the disintegration of the rocks shift their position according to the direction of the wind, which carries it in a cloud above the

crests, and scatters it now on one side, now on another, forming rounded heaps which blend in graceful curves with the coarser sands at the base. Shifting dunes of sand, some of which are as much as 166 feet high, move here and there through-



ENTRANCE OF THE KOKOSKO ROUTE AT ABU-HAMED



out the open plain. They are all in the form of a crescent, the horns turning to the south under the influence of the north wind.

GEOLOGICAL FORMATIONS.

Nearly all the sandstone rocks and dunes are destitute of vegetation; but few shrubs are found on the slopes of the crystalline mountains, which are embellished by these verdant thickets. Hitherto no fossils of animals have been discovered in the sands of the desert of Korosko, but only some petrified trees, like those in the Bayuda steppe, in Egypt, and several other countries of Eastern Africa. According to Russegger, these Nubian sandstones have been deposited since the chalk period. One of the most extraordinary products of this geological formation consists of spheroidal stones of all sizes, resembling balls, shot, and bullets. They are so thickly scattered over the soil that travellers had seriously proposed to Mohammed Ali that he should supply his artillery parks from this source. These stone bullets, similar to those found in Hungary in the mountains near Koloszar, are formed of concentric beds of variously coloured sands, hollow in the middle, or else filled with loose sand, and with a very hard ferruginous exterior. The circumference of the stone is frequently marked by a ridge similar to that which the moulds leave on the bullets at their point of contact.

The great caravan route which traverses the Nubian desert, to the east of the Nile, from Abû-Hamed to Korosko, extends over a space of about 300 miles, which comprises some of the most remarkable localities, offering examples of all the geological formations of the country. This region is specially termed *atmur*, a name probably of Berber origin, for in the language of the Tuaregs *temura* means a "tract of country." After having ascended the trachyte-crested hills, and surmounted the granite escarpments, the caravan route winds from breach to breach between the sandstone hills, and even crosses a plain which, according to the Arabs, is an ancient lacustrine basin, the Bahr-belâ-mâ, or "Waterless River." Nevertheless there are no indications which point to the presence of running or still waters having ever been in this place. One well only, that of Morad, yields a scanty supply of fresh water to travellers crossing the *atmur*. But there are regions in this desert where the sand contains abundance of saline substances which doubtless proceed from ancient evaporated lakes. In the vicinity of the river the natives extract this salt and sell it to the caravans.

The largest of the dry valleys which wind through the desert of Nubia is that of Wady-Allaki. Taking its origin in the mountains of the Etbaï, it follows a north-westerly course and falls into the Nile below Korosko; its basin is more than 10,000 square miles in extent. It has occasionally happened that the Wady-Allaki, suddenly filled by heavy showers, has for some hours suddenly become a powerful affluent of the Nile, the force of its current completely barring the main-stream. But the valley of the wady and the tributary gorges are nearly always dry; nevertheless, the concealed moisture is revealed by the trees, under which the Bisharin tribes are accustomed to encamp.

THE BAYUDA STEPPE.

To the west of the Nile, whose long silver band, skirted with green, stretches in two great curves across Nubia, rise mountains similar in formation to those of the east—primitive rocks, sandstone cliffs, and volcanic lavas and scoriæ. The

Fig. 92.—BAYUDA STEPPE.

Scale 1 : 3,400,000.



highest groups of summits, Jebel-Magaga, Jebel-Gekdul, and Jebel-Gilif, occupy precisely the centre of the immense circuit, three-fourths of which are described by the course of the Nile between the Sixth Cataract and Dabbeh. Their peaks are said to attain a height of from 3,330 to 3,660 feet. The whole of the space

commanded by these heights is a mountainous country covered with hollows, or a few groves of green mimosas during the rainy season, and bounded to the west between Khartum and Ambukol by the depression of the Wady Mokattam, or the "Valley of Inscriptions," into which probably flowed an ancient arm of the Nile. The whole region, though much less barren than the atmur of Eastern Nubia, is termed the steppe or desert of Bayuda. Gekdul and Magaga, whose highest point, Ussub-Ommaneh, is a cupola of red porphyry, or erupted masses, around which the sandstone rocks, probably liquefied by the outpourings of lava, have spread over the sands in sheets of siliceous scorix. According to Russegger, it is owing to the eruption of these ancient volcanoes that the Nile, formerly flowing to the west, was compelled to turn eastwards in order to effect its great bend of over 480 miles. In the western part of the steppe the ferruginous sands of the mountains, washed down by the rains, have covered the soil in thick layers. Here and there the sand has collected in the hollows where the wadies have deposited their alluvia; the surface of the plain is thus streaked with long bands of diverse colours of the strangest appearance.

The Jebel-Simrieh, formed of pink sandstone, and other hills to the west of the depression of the "Valley of Inscriptions," are less elevated than Magaga, and like it are not very long; the valley of the Wady-Melek, whose bed, during the floods, gives passage to the waters of Dar-För, bounds these mountains on the west. On the banks of the Nile itself, in the space comprised between Marawi and New Dongola, there are nothing but sandstone cliffs, the crystalline rocks reappearing only at the Third Cataract. Here the heights on the left bank form part of the chains which rise in Eastern Nubia; to the west they soon become lost under the sands, being succeeded by oases at a short distance from the river and parallel with it. In this respect the western zone of the Nubian region forms a complete contrast to the tracts beyond the Nile. To the north of Wady-Halfa, and nearly opposite the colossi of Ibsambul, lies a deep valley overlooked by the black or reddish walls of ancient volcanoes. This is the Wady-Jehenna, or "Valley of Gehenna," a terrible region which the Arabs shun as if it were still burning.

In Western as well as in Eastern Nubia, the sandstones rapidly crumble away under the influence of the wind, rain, and heat, and change into loose sand which the aerial currents reform into dunes or taluses. In many respects the sands of Africa recall the snows of the great Alps; like the snowfields they collect in the depressions and crevasses of the rocks, glide over the ravines in avalanches, crown the needle-like points of the peaks, and here and there project over the precipices, forming narrow strips which give way at the slightest shock. Between the dunes and the populations of the oases on the edge of the desert the struggle is incessant; the sands, borne forward by the winds, surround the trees, cover up cultivations, block up the fountains, and encroach upon the inhabitable domain. But on his side the peasant utilises the sand by mixing it with his soil. The extent of ground he can render productive depends entirely upon the quantity of water at his disposal.

CLIMATE.

Nubia is divided into two climatic zones, whose limits, changing yearly, are defined by the struggle between the northern and southern winds. In summer, when the solar rays fall vertically on the soil between the equator and the northern tropic, the southern winds follow the sun into the northern hemisphere, carrying the rain-clouds with them; but they scarcely ever reach the seventeenth degree of latitude. The last periodical rains fall in the valley towards the junction of the Atbara, the last tributary watercourse of the Nile. In this spacious region the force of the southern winds is neutralised by that of the aerial currents blowing from the north, the result of this struggle being the constant shifting of the parting-line.

Travellers across the Bayuda territory in May or June have to struggle against the winds, being at one time forced from their course by the south wind at another by that of the north, their way thus lying between two conflicting tempests. However, the winds often blow alternately, that of the north prevailing during the day and being replaced at night-time by that of the south. To the south of this zone fall periodical rains, the more copious and longer in duration the nearer the equator is approached. To the north, the soil is not watered by the summer rains, being visited only by a few showers, which sometimes even cease for several years together. When the northern winds predominate in the intermediary zone and drive the opposing currents south of the usual limit, the drought becomes general, bringing to the Nubians distant from the Nile famine, involuntary exile, and brigandage.

The region of the border mountains, in the vicinity of the Red Sea, is more favoured than the countries of the interior. The abundance of the vapours in this littoral zone promotes the advance of the rain-bearing clouds towards the north. Instead of stopping at the seventeenth degree of latitude, they extend as far as the twenty-first degree of latitude, and beyond this limit occasional showers are frequent; but brought down by the northern winds they fall in winter, whilst the opposed southern winds cause the moisture to be again precipitated in summer. The result of this relative abundance of the rains on the coast region is a great contrast between the Nubian districts near the Red Sea and those of the interior. To the east the Arab nomads find abundance of wells, fountains, and pasturages for their cattle; but to the west nothing is visible but rocks and sands, the eye of the traveller seldom lighting upon a grove of palms or mimosas, or any trailing shrubs growing on the banks of the wadies. In some years the drought is so complete that no shepherd dare venture into the desert.

Nubia thus offers some well-defined natural divisions. The southern part of the country, comprising nearly the whole peninsula of Bayuda, is a district of steppes; the coast of the Red Sea presents an analogous appearance, whilst all the rest is desert and atmur, with the exception of the verdant and populous Nile Valley lying between these two dreary wastes. In many places this valley is reduced to a strip a few yards in width; it even disappears altogether at the

mouth of the gorges, where the cliffs spring directly from the river bed. But however narrow and exposed this river valley may be, its appearance is none the less charming to travellers coming from the arid desert, where the only fluid obtainable is the brackish water of the wells, and where the horizon is bounded by the eternal rocks and sands. On approaching the river the Arabs perceive its vicinity by the moistness of the air, and they press forward with joyful cries of "Allah be praised! we feel the Nile!"

The Nubian desert is one of those whose temperature varies the greatest between the heat of the day and the cold of the night. Although these regions are traversed by isothermal lines of 79° F. and 81° F., and although the thermometer frequently exceeds 104° F., nevertheless travellers often shiver with the cold before sunrise. The cause of this is the excessive dryness of the atmosphere, which causes the heat to radiate into space during the night; the north wind, which blows nearly constantly, also contributes to this fall of temperature after sunset. The moisture of the air is so slight that it rarely ever falls in dew on the Nubian deserts. The bodies of animals which have died on the journey dry up without becoming decomposed, the flesh gradually crumbling into dust beneath the hard and extended skin without emitting the least odour. Although the bodies of those who die during the journey are scarcely covered with a few inches of sand, they would easily pass unnoticed were it not for an upright stone placed over them by some pious hand. The purity of the dry desert air explains its perfect healthiness, not only for the native Nubian but also for the foreigner. No sanatorium could be preferred to an encampment far from the exhalations of the moist plain, at least by those who, like the Arabs, are careful to clothe themselves in such a way as to be unaffected by the abrupt changes in the temperature of night and day. The Egyptian plague has never penetrated into Nubia, and ophthalmia, so dreaded in the regions of the lower Nile, is unknown above the cataracts of Wady-Halfa, in spite of the glare reflected from the polished rocks and the glittering surface of the river. But in the Nubian regions where the inundations of the Nile stretch far into the plains, leaving stagnant pools here and there, malignant fevers are very common and frequently terminate fatally. The majority of the natives do not draw their drinking water directly from the river, but sink wells some distance off into which the water filters through the sand, and they leave it exposed to the sun for some time before using it. They are also careful not to follow the example of the Turks, and build their towns on the river bank; their villages stand on the steppe or on the edge of the desert, beyond the zone of the marsh fevers.

FLORA.

A land of transition in its climate, Nubia also presents transitional forms in its fauna and flora. The baobab is no longer found in the plains to the north of Kordofân and the advanced Abyssinian ranges. The deleb-palm, which predominates in the region of the two Niles, is no longer met with north of the confluence; the southern variety of palm which is the true dâm-palm, advances farther towards

Egypt, but it scarcely ever exceeds the limit of the Suakin-Berber route; north of this point it no longer grows spontaneously. The argun, groves of which are found in some hollows in the Korosko desert, and which the majority of travellers call dûm, is another kind of hyphæne resembling the dûm, however, by the characteristic bifurcation of its branches. The peculiar taste of its fruit might procure for it the name of the gingerbread-tree.

Elsewhere the date, which is the characteristic plant of Northern Nubia, supplying the people with food, shelter, hurdles, baskets, seats, and coarse garments, is becoming scarce in Southern Nubia, the last specimens being in the gardens of Khartum. Sycamores are still found in the streets of Dongola, their evergreen foliage contrasting with the grey walls, but they are gradually disappearing towards the south. Far from the river, the prevailing trees are acacias and mimosas of various species. A tree called *ochas* yields a quantity of fruit covered with silky down very brilliant and perfectly white; according to Cluny fine fabrics are woven from its fibre mixed with wool. The fruit-trees of the Mediterranean zone, such as vines, oranges, and citrons, are cultivated only in the gardens, their fruit being sour and tasteless, and generally rotting before maturity. The cereals cultivated in Nubia, either on the banks of the Nile or else in the "Valley of Inscriptions," and in the steppes of the interior, belong to the same species as those of Egypt.

FAUNA.

The wild fauna of Southern Nubia does not differ from that of Kordofân and the slope of the Abyssinian mountains. Lions, leopards, hyænas, antelopes, and gazelles, giraffes and ostriches, inhabit the mimosa forests on the banks of the White Nile and the Bayuda steppe; monkeys descend the Nile as far as Berber, but neither the elephant nor the rhinoceros pass beyond the forest regions on the middle Atbara. The last hippopotamus that has been seen towards the north was killed in the Hannek cataracts about the middle of the century, although ancient pictures represent it as inhabiting the stream below Syene.

Millions of aquatic birds swarm in the islets and on the banks of the Nile. Russegger has followed in the fresh mud deposited by the waters of the Nile the traces of an animal whose footsteps resemble those of the quadrumana, and which were directed from the water towards the shore; but he did not see the animal itself, the *amanit*, about which the Nubians tell strange stories. The termites, still so much dreaded at Dongola, are not found farther north than the twentieth degree of north latitude.

The Nubians possess only one kind of domestic animal, the horse, which is tall and endowed with special qualities. Evidently of Arab origin, like those of the Kababish race bred in the neighbouring oases, these coursers, with erect heads and thin legs white up to the knees, possess none of the beauty of their ancestors, but they are astonishingly nimble and fiery; they are fed on milk and durrah, and occasionally on dates. The gallop is their usual gait; they roam throughout the

whole region, even in the mud of the Nile and on the rocky slopes of the mountains. But they cannot stand a change of climate; they die out of Nubia, and even in the country itself have been greatly diminished since they have been so much sought after by the Egyptian officers. The camels of the Bisharins and Ababdehs are no less famous for their speed than the horses of Dongola.

INHABITANTS.

Often conquered, and consisting of little more than the double riverain zone of the Nile, Nubia is peopled with tribes of very mixed origin, such as Hamites, Arabs, Nigritians, and Turks. Nevertheless the basis of the Nubian population may be said to consist of Barâbras, who call themselves "the people of the soil." Some authors have considered this term Barâbra synonymous with that of Berberi, applied to the Tuaregs and to the Kabyles of the Sahara and Mauritania, who are related by their speech to the people of Siwah, an oasis bordering on Egypt. But so great is the difference of colour, type, and mental qualities of these populations, that it would be difficult to believe them related, without going back to times far anterior to recorded history. According to a general but probably groundless opinion, the term Berberi, Barâbra, corrupted to Berberins or Barbarins in the language of the Franks living at Cairo, is merely the Greek or Latin word "barbarian" applied to the black populations who live above the cataracts beyond civilised Egypt.

The principal Nigritian tribes, mentioned over forty centuries ago on the pillars of the temples as having dwelt on the spot where the present Barâbras now live, are designated by the name of Uaua, a term which seems to convey a species of contempt. It is just such a word as would be applied to a nation of "yelpers," a name differing little from that of "stammerers," which for the Greeks had the primitive meaning of the term "barbarians." But since the name of Beraberata has been discovered on the Theban lists of tribes, it is hardly to be doubted that the term "Barâbra" is derived from it.

But however this may be, the Uaua Negroes, as well as the Beraberata, have become the Barâbras of our days, but not without diverse crossings with different populations. From the twelfth to the twentieth dynasty the whole of the Nile Valley, colonised by the Egyptians, had become a Retu land in language and race. The reactionary movement scarcely commenced before the Persian epoch, but it was not till the Roman period that the native elements again took the upper hand. During the government of Diocletian the Blemmyes, the present Bejas, and more especially the Bisharins, invaded the region of Nubia and settled there in a compact body. It was found necessary to withdraw the Roman garrisons, and in order to replace them an appeal had to be made to the warlike tribes called the Nubotæ, who were very probably of the same stock as the Nubas of Kordofân. From these people the Uauas and Blemmyes have received the dialects which still exist, though greatly corrupted by Arab terms.

THE NUBIANS PROPER.

The Barbarins are amongst the darkest of the African tribes. Their complexion varies from the colour of Florentine bronze to an almost bluish-black; but under their dark skins are transparent reddish hues, by which they are clearly distinguished from the Central African Negroes. The head is dolichocephalous, and the receding forehead is covered with hair which, without being woolly like that of the Negro, is nevertheless very wavy. Like the Nigritians they have a scanty beard, but their features are much more regular; and Barâbras are frequently met with who come up to the standard of European beauty. The nose is straight and firm, with broad nostrils; the lips, clearly cut, are rarely thick or pouting; the teeth are small and beautifully white; the cheekbones are slightly prominent, and their regular features are set off by large, open, lustrous eyes.

The Barâbras are of middle height and well proportioned; the chest is shapely and broad, the forearms and calves are somewhat slight, but less so than amongst the Bedouin nomads. Like the Funj and Bejas, they have the custom of making three oblique scars on each cheek, for which they can give no reason, as it does not serve to distinguish them from other peoples of Negro or Beja race. Under the pretence of working medical cures, the Barâbras also disfigure their handsome bodies with wounds. Directly they experience any local pain or mere uneasiness, the barber cuts a gash in them, and draws off the blood which escapes from the wound through a cow's horn; but to prevent the wound from healing too quickly it is kept open by irritating powders. At other times nails are made red-hot and thrust into the flesh by the head or point, according to the gravity of the disease.

The usual dress of the Nubians consists of a tunic, over which they wear a long blue cotton robe like that of the Egyptian fellahin. The dress is completed by sandals and a felt skull-cap, for which some substitute the turban. Weapons are forbidden, but there are few men who do not carry a knife or poignard concealed in the left sleeve and attached by a twisted leather thong.

In the southern part of Nubia the majority of the young girls, instead of tunics, still wear the rahad, or girdle of fringe ornamented with pearls, glass beads, and shells. Nearly all the northern and southern Nubian women wear a ring in one of their nostrils, and pierce the lobe of the ear, inserting pieces of white wood, awaiting the time when their husbands shall replace them by trinkets of metal. The female manner of wearing the hair is still the same as that represented on the Egyptian monuments; but when a woman dies it is quite a day's work to unravel her hair, which is saturated with grease and ochre, because their religion forbids that they should be buried with the hair dressed. Some women after having curled their hair, cover it with a thick coat of gum, which causes it to grow round the head in the shape of a polished helmet.

The Nubians are laborious agriculturists. Like the Egyptians, they water the soil with the shaduf or sakieh, and sow it with durrah, dokhn, and other cereals. But the produce of their fields, restricted to a narrow zone between the river and

the steppe, is not sufficient to support them, and the migrating movement, which attracts so many Danaglas towards the southern countries, also yearly brings a number into the towns of Egypt to seek their fortune. Most of them become servants in the palaces and hotels of Cairo; others, clothed merely in a wide-sleeved blue tunic, or else splendidly attired in brocade and gold, become *sais*, and run before the carriages of the pashas and rich Europeans. Faithful and obedient, relatively clean, nearly all knowing arithmetic, and how to read and write Arabic, they are usually preferred to servants of other races. Those who succeed in escaping diseases and accidents gradually manage to save a little, and when sufficiently rich they return to their country and purchase a plot of land, and live peacefully on their income. Egypt thus contributes to support the Nubian population, thanks to the thrift of the immigrants; but the taxes and exactions of every kind have taken away from them much more than they ever received. Before the Egyptian conquest the people of Nubia were certainly much better off than they are at the present day; in many places are to be seen on the rocks and river banks the picturesque ruins of houses and even villages, such as would at present be no longer built, whilst remains of abandoned agricultural tracts are found at a height to which it is not now thought necessary to bring water. In many a village the people no longer defend their dwellings, even against the termites; when the house falls they take refuge under a hut of branches or mats.

Emigration on the one hand, and on the other the passage and sojourn of officials and soldiers of all races, have naturally variously modified the primitive type, and men and women are frequently met amongst the Nubians who recall the type of the Retus, figured on the Egyptian monuments. But how many of them are there who no longer possess the general character of the race, and whom servitude and misery have rendered as cowardly, timid, and effeminate as the fellahin! But, taken collectively, the Nubians are active, cheerful, confiding and gentle. But when brought into contact with the Egyptians they too often contract their drunken habits.

Since their conversion, the Nubians have become much more zealous partisans of Islam than the lowland peasants of the Nile, and regularly observe the usual prayers and prostrations. Nor are they incapable of a higher state of civilisation, as is proved by the many Nubians who have had the opportunity of studying in Cairo or even in Europe, and as was shown in the past by the existence of the ancient pagan realm of Meroë, which was succeeded by the Christian states of Dongola and Aloa. The name of *kirágé*, derived from the Greek *kyriaké*, that is to say "Day of the Lord," which they still use to designate the Sunday, is a reminiscence of their now-extinct Christianity.

THE DANAGLAS AND KENUZI.

The Barâbras, who are more especially termed Danaglas or Danaglehs, that is "People of Dongola," live in southern Nubia, principally round the capital and in the islands of the river. They differ from the northern Barbarins by their love

of trade; from Khartum in Kordofân to Darfur they are grouped together in numerous colonies. They also hire themselves out as mercenaries, and in this capacity they were formerly largely employed to make raids into the zeriba region to procure slaves for the dealers.

The dialect of the Danaglas differs little from that of the northern Barâbras; but it is much more corrupted by Arabic words, thanks to their commercial relations with this people. The complexion of the Mahas, who occupy both banks of the Nile about the region of the Third Cataract, is darker than that of the Danaglas, and they are usually more boastful, haughty and morose in character; they look upon themselves as a distinct race. The Kenuzi, the Kens of the ancient inscriptions, inhabit a valley farther north, between Korosko and the First Cataract.

The pastoral peoples, who enclose the Nubian peasants on both sides of their narrow Nilotic valley, all call themselves Arabs, whatsoever their origin may be. Their language is that of the Prophet, which becomes yearly more universally spoken. The name they apply to the Nubians, in its true sense recalling the ancient term of "barbarians," is said to signify "embarrassed, constrained, speaking with difficulty." These pastoral peoples nowhere intermingle with the Nubian peasantry; they have their own villages, feast-days, and national dress, and nearly all of them go bareheaded.

THE BISHARIN.

The most characteristic representatives of these Nubian "Arabs," and of those constituting the most numerous group of tribes, are the Bisharin, who are pre-eminently Bejas, and whose name, slightly modified, may probably be that of the whole race. These Bejas are usually estimated at 200,000 persons. The Bisharin rarely attain a great height, but they are extremely shrewd, and although thin and sinewy, are well proportioned. Their complexion differs greatly from that of the Nigritian peoples, and excepting in those families that have been modified by crossings, does not present any blackish tinge. Their colour is more of a red, like that of the American Indian, and amongst the women, who are under cover of the tent, differs little from that of the Calabrian and Sicilian peasant-women. The youths are so slender and graceful in form that they might easily be taken for young girls.

During their prime the features of the Bisharin are regular and slightly angular; the nose is straight and shapely; the skin, always healthy and clean, appears as if stretched over their hollow cheeks, and on smiling, a glimpse is obtained of their pure ivory teeth, whitened by the continual mastication of the bark of the arak, an evergreen tree found in abundance near Dongola. They never smoke. Old age comes upon them rapidly, fatigue, misery, hunger and thirst quickly changing their appearance. The eye is bright but half shut, which is caused by their custom of half closing the lid to evade the blinding light reflected from the sands.

This ocular peculiarity gives them a somewhat ferocious appearance, and many of them might certainly be accused of cruelty. They are often spoken of by travellers as men without pity or honour, and avarice is their ruling passion. Cheerful, inquisitive, and garrulous, they converse with animation. While few of them are of a religious temperament, they have nevertheless preserved a few practices of an origin anterior to Islam; they never kill the serpent or the partridge, which latter they look upon as a sacred bird.

From the linguistic and geographical standpoint, the Bisharin form a connecting link between the Hamitic populations and the Egyptians. The demotic and hieroglyphic inscriptions of Meroë are supposed to be written in their ancient dialect. Property amongst the Bisharin is not personal, but common to all, being divided amongst the families or tribes. Some parts of the steppes are, moreover, considered common property, all the tribes having the right to graze their herds on these tracts. The great courage of the Bisharin is made manifest in the rules regulating their duels. Each man in turn seizes a knife, which he thrusts into his adversary's body, taking care not to wound him mortally; the elders act as umpires, praising or blaming the attitude of the combatants, and separate them when honour seems to be satisfied. Amongst some of the tribes adultery is considered a very minor fault; the nobility of the race is transmitted by the women.

THE ABABDEH OF NUBIA.

The Ababdeh, "Arabs" of African origin, probably the Gebadéi of Pliny, are said to have numbered 40,000 at the period of Russegger's voyage in this country. But they appear to have diminished greatly, having doubtless amalgamated with the Bisharins, whose hereditary enemies they were at the time when they constituted a powerful nation. Their principal tribes are encamped in Nubia, the others overrunning the region of plateaux and ravines comprised between the Nile and the Red Sea, as far as to the north of Kosseïr.

The Ababdehs call themselves "Sons of the Jinns," as if to point out that they are aborigines born in the desert. They somewhat resemble the Bisharin; but their features are more delicate, their movements more graceful, and their disposition milder. The northern Ababdeh speak Arabic intermingled with Barâbra words, those of the south have retained their Beja dialect, whilst the predominating language amongst those in the vicinity of the Nile is said to be that of the Barbarins. Klunzinger has ascertained that the Ababdehs of Kosseïr refuse to speak their national tongue before strangers, as they think that to reveal their mysterious dialect would bring ruin upon them. Evil would also fall amongst their family if a girl were to set eyes on her mother after her marriage. Hence, as amongst the Bantus of southern Africa, the Ababdeh husband is expected to select for his residence some distant place where he is never likely to meet his dreaded mother-in-law.

Unlike the Arab, he does not live under the tent, but builds a hut with hurdles and mats, which he pulls down and transports on camels, when it is necessary to

seek fresh pastures. The Ababdeh likewise dwell in grottoes, similar to those of their ancestors the Troglodytes. If the clay of these caverns were explored, it would undoubtedly yield a rich harvest of prehistoric objects.

Gums, a few other simple products, and fish, in the vicinity of the Red Sea, are the only means of exchange by which the Ababdeh procure the durrah required for their frugal diet. Most travellers speak highly of their honesty, gentleness, and frankness, and however miserable they may be, they never beg like the fellahin.

OTHER ETHNICAL ELEMENTS IN NUBIA.

The powerful Kababish and Hassanieh tribes, who extend beyond their own domains, where they are too much crowded together, into Kordofân and into the peninsula lying between, and formed by the two Niles; the Shukrieh, encroaching on the steppes to the north of the Atbara; the Sawrat, the Hawins, and the Jeraiad of the Bayuda; lastly, the Robabat, and Shaikieh, who occupy the two banks of the Nile between Berber and Dongola, and now speak the Danagla language, complete the population of Nubia. These Arabs or peoples assimilated to the "Arabs" possibly amount to 200,000 or 300,000 persons. Immigrants from other regions have been amalgamated with the body of the Barâbra nation, and the memory of their origin has been retained only by the aristocratic families who have taken interest in preserving their genealogies.

Such is the case with the Bosniaks, who are descendants of the soldiers sent in 1520, on a mission to re-establish peace in the country. They caused fortresses to be built on the escarpments overlooking the river, settled there as sovereigns of the country, and allied themselves by marriage to the ancient chiefs. At the present time these "Kalaj" of Bosnia are still the most important people of Lower Nubia, more especially between Assuan and Korosko, and to them it is that the Egyptian Government has intrusted the local administration.

TOPOGRAPHY.

Below Berber, *Abû-Hamed*, the principal starting-point of the caravans, occupies one of those positions which in time become market-towns. A large city might even spring up in this place were both banks of the Nile not bounded by a vast desert. Here it is that the river, ceasing to flow north-westwards, trends abruptly round to the south-west, commencing the great curve which it completes at a distance of 240 miles farther north. To avoid this enormous détour the merchants are compelled to leave the Nile, and journey for seven or eight days amid the rocks and sands of the desert.

South of *Abû-Hamed* the valley of the Nile is broadened by the large island of *Mograt*, which leaves to this part fertile lands more extensive than those of most other Nubian villages. But the port where the merchants of Korosko embark and disembark is merely a group of cabins, inhabited by camel-drivers and fishermen. Doubtless the caravan traders in this country have no need of warehouses to protect

their goods; they deposit their bales in the sand, under the protection of the shrine consecrated to "Saint Abû-Hamed," and when they return, after an absence of months, or years, they always find their property just as they left it under the shadow of this venerated tomb.

MARAWI—BARKAL.

Some ruins are found on the banks of the Nile between Abû-Hamed and the Fourth Cataract, but it is below these rapids that, next to those of Meroë, the most remarkable ruins of Upper Nubia are met with. *Marawî*, the village which at present stands in this part of the valley, is a name which seems to be derived from that of the ancient capital; nevertheless, archæologists, relying on the statements of authors, are certain that Marawi is the Napata of Herodotus, and the inscriptions deciphered are unanimous on this point.

Marawi, situated at the foot of white rocks, occupies an important geographical situation, being the place where navigation recommences below the Fourth Cataract, and the converging point of the two routes from Berber and Shendi, across the Bayuda steppe. The Wady-Dum, one of the most fertile and least dried-up valleys of this region, forms a confluence with the Nile valley precisely opposite Marawi. Large heaps of rubbish mark the site of the destroyed monuments, and, not far above, the remains of great buildings are still to be seen at the base of the superb Mount Barkal, an enormous quadrangular sandstone mass, poised in the middle of the plain like a pedestal awaiting its statue. The hieroglyphic name of *Barkal* was "Holy Mountain," and its principal temple was dedicated to the glory of Ammon-Ra. Of this building but few ruins remain, sufficient, however, to leave no doubt as to the Egyptian origin of the monument attributed to Ramses the Great. Nevertheless, the name of Amenemha III. is also found on the granite rams and lions of natural size. In 1863, Mariette discovered amongst the monuments of Barkal five columns of the highest importance, proving that Ethiopia had a very important position among the Egyptian dynasties. For a period of fifty-one years, three Ethiopian kings, residing in Nubia, ruled over the greater part of Egypt. One of these conquerors, Tahraka by name, carried his expeditions even into Asia. The European museums possess several of these monuments from Mount Barkal.

Groups of pyramids are found near the temple. But the most remarkable structures of this description are those which, to the number of twenty-five, stand on the left bank of the Nile, near the village of *Nuri*. These latter, larger than the pyramids of Meroë, are not so well preserved, owing to the less durable qualities of the sandstone, and nearly all have lost their exterior coating of polished stones. In the interior are found vaults, a method of support which was till recently believed to be an Etruscan invention, but which, nevertheless, occurs in various Oriental countries, notably at Saqqarah in the tombs of the sixth dynasty.

In the wady of Abû-Dum, south of Nuri, are seen the ruins of a fine church and of a convent in the Byzantine style; but nowhere, on the left bank of the river, are to be found the traces of such an important town as *Napata* must have been, which stood on the northern bank. The whole of this country formerly possessed

a large population. The numerous ruins found beyond the group of buildings of which Marawi is the centre, belong to diverse historical epochs; they consist of pyramids, dating from the period of the Byzantine influences, and fortresses constructed after the triumphs of Islam.

OLD AND NEW DONGOLA.

The head of the curve which the Nile describes before resuming its northern course, like that of Abû-Hamed, could not fail to become a rendezvous for merchants. But the deviation of the river is here much more extensive, and the caravans have had the choice of several sites for their stations of arrival and departure. Thus follow in succession on the left bank of the river, going northwards, the trading stations of *Korti*, *Ambukol*, *Abû-Dûm* (*Abdum*), *Dabbeh*, and *Abû-Gossi*, where terminates the route to Khartum through the Wady-Mokattam. Dabbeh was the station chosen by the British expedition of 1884 as the centre of their supplies. Abû-Gossi has been fixed by the engineers as the point where the Nile railway will enter on the desert along the valley of the Wady-Melek; at the Sotahl wells the line will branch off on one side towards Khartum, and on the other towards Darfur.

Dongola-el-Ajusa, or *Old Dongola*, which is believed to have existed under the name of Deng-ur at the period of the ancient Egyptian Empire, was till recently the most important town of the country. It stands farther down on a sandstone rock which commands the right bank of the river from a height of about one hundred feet. Here was discovered a column which has since been placed in the Berlin museum.

Dongola was the capital of a Christian realm which lasted for eight hundred years, down to the fourteenth century. It was still populous at the time when the Mameluks, flying from the wrath of Mohammed-Ali, settled down in the country in the character of devastators, the Turks, who followed close on their heels, completing the work of destruction. The islands which follow in succession between the arms of the Nile, from Old to New Dongola, are mostly cultivated, and present a charming appearance, with their borders of palms reflected in the flowing stream. Naft, one of these islands, is the birthplace of the Mahdi, Mohammed Ahmed.

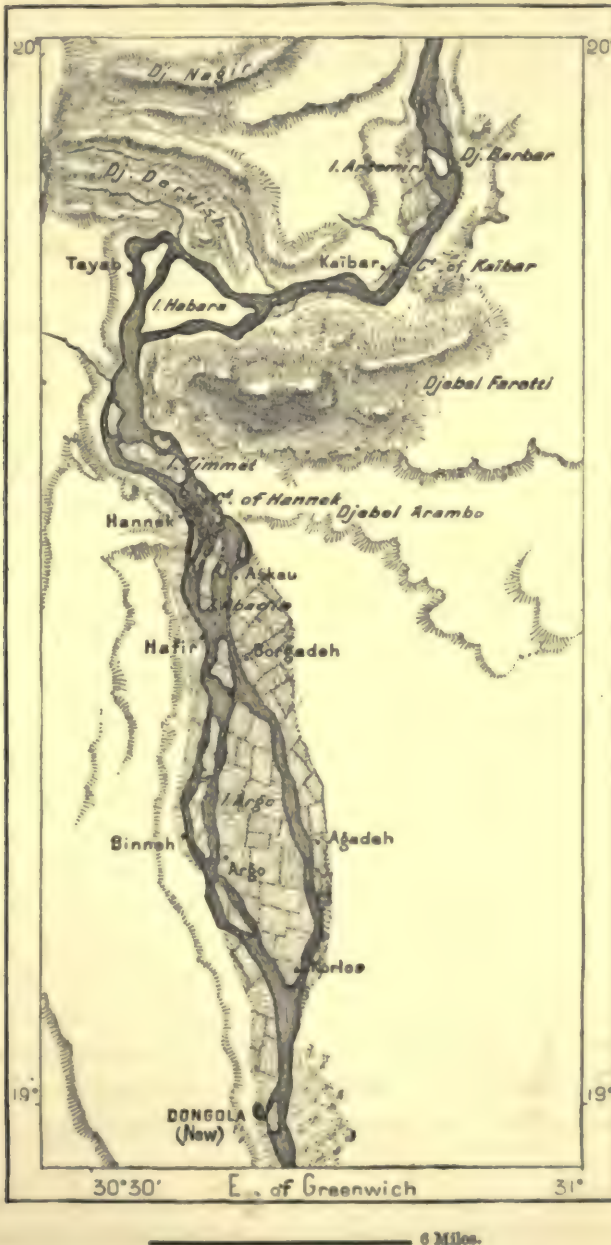
Dongola-el-Jedideh, or New Dongola, the present capital of Nubia, is also known by the names of *Kasr Dongola* (Castle of Dongola), and *Al-Ordu* (the Camp), in reference to the fact that it really sprang from a camp which the Mameluks pitched near the village of Marakah. It lies over a mile west of the great arm of the Nile, on the bank of a canal which at high tide serves as a port, but which at low water becomes a mere stagnant pool emitting dangerous miasmas. Consisting of low houses with courts, outhouses, and gardens, Dongola occupies a considerable extent of ground, and some of its buildings, amongst others a fortress in which are to be seen the remains of a castle built by the naturalist Ehrenberg, give to the whole a sufficiently imposing appearance. According to Ensor, the mean population of the

town does not exceed 7,000, which, however, is doubled when the peasantry return from their fields in the neighbourhood.

To travellers coming from the north, who are accustomed to houses with

Fig. 93.—DONGOLA AND THE THIRD CATARACT.

Scale 1 : 800,000.



terraces, Dongola offers a great surprise. They notice the inclined roofs, which immediately point out the change in the climate, the transition from the dry zone to that of the periodical summer rains. They also observe the incessant work of

destruction carried on by the termite, an insect unknown to the riverain peoples of the Lower Nile, and which compel the people to be continually engaged in repairing their dwellings. Before the war, which for several months caused Dongola to be one of the most important bulwarks of the Egyptian Empire, this town enjoyed a fair amount of commerce; and its port was often crowded with craft scarcely inferior in size to the dahabiyeh, but carrying a square instead of the lateen sail used below the cataracts.

Below Dongola the course of the Nile is divided by *Argo*, one of the largest islands of Nubia and one of the most beautiful, thanks to its wooded hills, cultivated fields, villages hidden beneath the foliage, and its sakieh or waterwheels, which the oxen turn slowly beneath the shade of the sycamores. Thousands of years ago *Argo* was one of the centres of Egyptian civilisation in the Nubian regions; here was settled, at the period of the third dynasty, a powerful colony of Egyptians. On this island have been discovered huge ruins dating from this epoch, notably two quadrangular masses or tombs, a magnificent colossus of Sookhotpu IV. and remains of sculptures of the most exquisite style and partially engraved with hieroglyphics. Two unfinished columns of grey granite lying upon the ground have been probably overthrown by some conquering people before being able to witness to the glory of the sovereign who had caused them to be erected by his enslaved subjects. At the period of the conquest of the country by the Turks *Argo* constituted a distinct kingdom.

THE WADY-KAB AND SELIMEH OASES.

To the west of Dongola lies the Wady-Kab, a chain of twelve oases running northwards, and following the Nile at a short distance from it. According to Russegger it should be regarded as an ancient arm of the Nile, continuing that occupied by the present depression of Wady-Mokattam. Bounded right and left by low eminences disposed like the cliffs along a watercourse, the Kab undoubtedly resembles a river-bed, and passes into the Nile valley above the cataract of Iannek. It is supposed to lie at a lower level than that of the present Nile; but the numerous sources and sheets of water contained in the wady might be accounted for by the infiltration of water from the river. The pasturages, brushwood, and groves of dates and other trees make of this depression a chain of oases which could support a numerous population, yet it is only periodically visited by Kababish nomads, who come to graze their herds and to procure dates, and the wood which they sell at Dongola for the construction of the houses and sakiehs.

Still farther north are other oases, but of much less extent. That of *Selimeh*, which lies on the caravan route between Assuan and Darfur, had no fixed population at a recent period, although its springs, sheltered by groves of palms, are filled with good water. At the period of Browne's expedition, towards the end of the last century, it is said to have had nothing but pasturages; but in the year 1822 Cailliaud here found tamarisks and some hundreds of palms, which had probably

been but recently planted. At one time the English appear to have entertained the project of constructing a fort, and maintaining a permanent garrison in the Selimeh oasis for the purpose of commanding the route to Darfur, and overawing the neighbouring peoples in the Nile valley.

SOLEB—AMARAH.

The usual route by river to the Selimeh oasis starts from the village of *Soleb*, below the Third Cataract. The houses of the village are overtopped by the ruins of a temple, one of the finest and largest specimens of ancient Egyptian workmanship to be found in Nubia. The columns which still stand are as elegant as those of Greek temples; but the sculptures and inscriptions in honour of Amenemha III. are not numerous, and the interior is a mere chaos of rubbish.

Lower down on the right bank of the river stand the sculptured pillars of the temple of *Amarah*, surrounded by palm groves, whose fruit is the most highly valued throughout the whole of Nubia. Here begins that region of gorges and rapids which the Arabs call “Botn-el-Hagar.” Although the cliffs on both sides almost meet here and there, the banks of the river are everywhere cultivated. When the strip of alluvia is only a few yards broad, it is usually sown with haricots or lentils; but when the arable zone is not so narrow it is used for raising crops of durrâh; and if still more extensive it bears a few palms, under which nestle small groups of huts.

The crests of the neighbouring rocks are crowned by the towers of strongholds and the walls of ancient entrenched camps. The remains of a feudal system similar to that of Europe, the Nubian castles differ little from those of the Rhine, except that the battlements and keeps are built in red brick, whilst the roofs, slightly inclined, are broader at the base than at the summit, and all the towers are conical. One of the thermal springs which rise in these gorges on the banks of the Nile, is much frequented by the sick persons of the surrounding country, but only during the season of low water, as at other periods the beach is covered by the floods. The sands give birth to several springs, many of which are probably rivulets which filtered through from the Nile during the floods, and are now returning to the main stream.

SEMNEH—EMKA.

At *Semneh*, one of the few villages situated in the Botn-el-Hagar, two cliffs on the banks of the Nile each bear an Egyptian fortress of the twelfth dynasty. At the period of the inundations the broad bed of the Nile is entirely flooded; but at low water nearly the whole of the space comprised between the two cliffs is occupied by shining black granite rocks, pierced with holes and intersected by deep crevasses. It is now merely a narrow channel about 100 feet broad, through which rushes a foaming body of water at the rate of several hundred cubic feet per second. In no other part of its course does the Nile present a more magnificent appearance.

Semneh is the well-known place where Lepsius discovered numerous inscriptions carved in the rock, indicating the height of the Nilotic floods during the reign of Amenemha III., and showing how considerably the water-mark has been changed during forty centuries. But even at a level much higher than that reached by the floods in the time of the Pharaohs, labyrinths of polished rocks are seen absolutely similar to those now washed by the present waters of the river. Opposite the village of *Emka*, the rock is more deeply scored with a horizontal line, which M. Pouchet believes to be the primitive level of the Nile floods. Not far from this spot lies Wady-Sarras, the present (1885) terminus of the railway which skirts the cataract.

WADY - HALFA.

Wady-Halfa, or the "Valley of Reeds," is situated on the right bank of the Nile, over a mile below the last rapid of the Second Cataract. A few fields and a belt of palms growing in the sand surround the huts of this village, which has become of great military and commercial importance as a station where the caravans unload and reform. Moreover, Wady-Halfa, as the capital of the frontier district, now enjoys an extensive administrative jurisdiction, the official boundary of Egypt and Nubia having been transferred from the First to the Second Cataract. During the campaign of 1884-5, the English here established their principal provisioning depôt in Nubia, and since 1875 the Egyptians have made it the terminus of the railway which skirts the Cataracts, and which may ultimately be pushed on to Dongola.

A bridge will have to be raised at *Koyeh*, near *Soleb*, below the Third Cataract, so as to open up a route to the capital of Nubia across the western desert. In order to surmount the rapids of Wady-Halfa, the English employed boats of a special make, the guidance of which was intrusted to Canadian and Iroquois boatmen, accustomed from their youth to sail down the rapids of the Canadian rivers. May not the presence of these Iroquois boatmen on the Cataracts of the Nile be taken as a striking proof of how greatly the size of the world has been reduced by steam?

DERR—KOROSKO—IBSAMBUL.

Till recently the population of Wady-Halfa was much smaller than that of *Derr*, a village situated on the right bank of the river, its houses scattered amidst groves of palms, in the most fertile part of Nubia, known by the name of *Bostan*, or "the garden."

The traffic of Wady-Halfa was also less important than that of the station of Korosko, situated on the right bank, at the northern extremity of the caravan route which avoids the great curve of the Nubian Nile. Between Wady-Halfa and Derr the river flows by the foot of two temples which take their place amongst the marvels of Egyptian art; they are the monuments of Ibsambul, more com-

monly known by the erroneous name of Abu-Simbel. They are both hewn out of the red ferruginous sandstone composing the mountains which rise on the left bank of the river. Between the two rocks gushes forth a cataract of yellow sand, borne thither by the wind from the Libyan desert, and forming an ever-increasing mound before each temple, which, on various occasions, it has been found necessary to clear away from the entrances and statues.

The southern or great temple, built in honour of Ammon-Ra, the sun-god, is entirely hewn out of the living rock. Before the gate sit four colossi, over 60

Fig. 94.—THE TEMPLE OF ABU-SIMBEL, IN NUBIA.



feet in height, of noble and placid countenance, supposed to represent Ramses II. ; but of one of these gigantic statues, decapitated by an English traveller, the lower part is all that remains.

All the colossi are covered with inscriptions, Greek and Phœnician being even found in the midst of the hieroglyphics. In the interior of the rock follow in succession three large halls and twelve of a smaller size, whose walls are embellished with hieroglyphic paintings and sculptures, whose colours are still brilliant. One of these compositions, which comprises no less than eleven hundred figures, represents the battle of Kadesh, the principal event of the Egyptian Iliad. Nearly

all the other sculptures also commemorate the glory of Ramses, conqueror of the Hittites. On the ceiling of one hall are carefully drawn various species of animals no longer met with in Nubia, but only in Kordofân and Senâr.

The smaller temple, consecrated to the goddess Hathor, has six colossi over 30 feet in height before the façade, and four of these huge masses again represent Ramses II.; two of the statues, the second and fifth, reproduce the features of Nofreari, the "Divine Beauty," and their children are placed between the knees of the wedded pair.

MAHARRAKAH—BEÏT-EL-WALLI.

The imposing sanctuaries of Abu-Simbel are succeeded by many other temples, which extend as far as the First Cataract. Fourteen have been described by archæologists, without including the sepulchral grottoes, gateways, and towers. Passing beyond the temple of *Sabua*, almost buried in the sand, and the ruins of the ancient town of *Mahendi*, whose tunnel-shaped galleries are still to be seen passing under the houses, the traveller reaches the Roman ruins of *Maharrakah*, which crown a promontory commanding an extensive prospect.

Then come *Dakkeh*, with its gigantic gateways, and *Garf-Hossain*, a sombre cavern hewn out of the limestone rock, now infested by bats, like all the abandoned edifices of ancient Egypt. Beyond this point are seen the ruins of *Kalabshah*, another superb temple built by Ramses II., where a Greek inscription has been found recording the victories that the Nubian king, Silco, gained over the Blemmyes. Close by yawns the well-known spéos or sepulchral cave of *Beit-el-Walli*, whose sculptures, representing triumphal processions, assaults, court and battle scenes, have been rendered more popular by engravings than any others. Although somewhat tarnished by the castings taken from them, the colours of the paintings of Beit-el-Walli are still remarkably brilliant.

The defile leading from Egypt in the direction of Nubia is preceded by temples and necropolises, which form, as it were, a long avenue of tombs. Catacombs are much more numerous than populated dwellings, and this region probably contains fewer living men than gods engraved on the walls of the temples or sculptured in the granite.





CHAPTER XII.

EGYPT.

BEFORE the form of the earth was known to be that of a globe, every nation thought that their country occupied the centre of the world, and a mere child could point out the precise spot—lake, mountain, or temple—which was supposed to be the middle of the earth. But the exploration of our planet has proved that on the circuit of the globe, no less than in infinite space, “the centre is everywhere and the circumference nowhere.”

Nevertheless, if the surface of the globe is studied according to the disposition of the continents, Egypt, the Misr of the natives, more than any other region may certainly be considered as occupying the veritable centre. From a geometrical point of view, Asia Minor, Palestine, and Mesopotamia might have as much right as the plains of the Lower Nile to claim a central position in the group of the three continents of the old world. But Egypt has the advantage over them of offering an easy passage from one marine basin to the other. Here cross each other the two great diagonal lines of the world, that of the overland routes between Asia and Africa and the ocean highways between Europe and India. The very opening of the Suez Canal has placed Egypt midway between America and Australia. The ancient Egyptians were quite justified in giving their country the position of the heart in the terrestrial globe, and one of the etymological renderings of its ancient name of Memphis gives it the sense of “The Middle of the World.”

HISTORIC RETROSPECT.

The people who dwell on the banks of the Lower Nile played a part in history corresponding with the geographical position of the land. Egypt is the first region of which there is any record in the annals of human culture. It already existed as a civilised power conscious of its own greatness at a period antecedent to the foundation of Babylon and Nineveh, and when the whole of Europe was still overrun by savage tribes that have left no record behind them.

The inhabitants of Asia Minor and Hellas, who were destined to become the teachers of the nations succeeding them, were still cavemen and denizens of the

forest, armed only with clubs and sharpened flints, at a time when astronomical observations, arithmetic, geometry, architecture, all the arts and nearly all the industries of the present day, as well as the games which now delight our childhood, or afford relaxation from the serious work of life, were already known to their Egyptian contemporaries. The origin of our sciences, and many moral precepts still taught by the "wisdom of nations," are found recorded on the papyri and on the bas-reliefs of the monuments of Upper Egypt; whilst many a dogma on which existing religions are based, may be traced in its original form to the documents discovered in the tombs of Thebes and Abydos.

To Egypt we owe the art of writing, afterwards modified by the Phœnicians, by whom it was communicated to all the peoples of the Mediterranean basin. The very groove of our thoughts had its origin on the banks of the Nile. Mankind is undoubtedly ignorant of its first epochs, nor can anyone assert positively that civilisation first arose in Egypt. Nevertheless, we are unable to trace it further back than the written records of this land, whose pyramids mark for us the limit of past times.

EGYPTIAN CHRONOLOGY.

The Egyptians had no chronology properly so-called, their only division of time consisting of the length of reign of their successive sovereigns. But the uncertain dates obtained from the succession of the reigns partially indicated on the buildings, and those handed down by Manetho, a priest under Ptolemy Philadelphus, can be checked by a few fixed dates, such as those of astronomical phenomena. Biot, when examining the hieroglyphics translated by Emmanuel de Rougé, was thus enabled to determine three dates in the history of Egypt comprised between the fifteenth and thirteenth centuries of the ancient era. In the series of events the Egyptian annals accordingly yield us at least one established date, seven centuries anterior to the Chaldean era of Nabonassar, which another astronomical coincidence has enabled us to place in the year 746. Chabas has also found in a "medical" papyrus in the library of Leipzig the cartouche of Menkerâ or Mycerinus, followed by a reference to the solar ascension of Sothis or Sirius, as having taken place in the ninth year of his reign. If the interpretation of the text be correct, calculation would fix the date between the year 3,007 and 3,010 of the ancient era, or a thousand years after the epoch attributed to the reign of Menkerâ in Mariette's chronological table. In any case, it is to be hoped that future discoveries will enable us with certainty to trace back the course of ages, and to determine positive dates for the origins of history, with which may be connected the fluctuating chronology of the most remote events of which the human race has preserved the memory. The same necessity which has caused the metrical system to be adopted for the measurement of terrestrial spaces, and which is now endeavouring to establish a common meridian, renders it equally indispensable that a common era should be sought, so as to establish a concordance for the events of various nations. Sooner or later, when the savants shall endeavour to get rid of the absurd chronological system which at present prevails in Christian Europe,

dividing history into two eras, in the first of which the years and centuries are counted backwards, they will very probably search the Egyptian annals for the first clearly defined starting-point between the dim twilight of unknown ages and the broad daylight of history.

SOCIAL CONDITION OF THE ANCIENT EGYPTIANS.

So ancient is the civilisation of Egypt that in certain respects it was known only by virtue of its decadence. The national records reveal to us the peoples of the Nile Valley constantly in a state of bondage, consequently living under a system which must have debased them, suppressing all personal impulse, replacing spontaneous growth of thought by formal rule, and substituting formulas for ideas.

But the extent to which a nation can develop itself and increase its store of knowledge is determined by the amount of liberty which it enjoys. What a ruler lavishly squanders in one day, to enhance his glory, had been laboriously acquired by free men or by those who enjoyed intervals of rest from the slavery imposed upon them by internecine warfare and the vicissitudes of their oppressors. Hence before being able to acquire their material resources, and the science of which the monuments they have left us are an existing proof, the Egyptians must have passed through a period of autonomy and obtained a state of relative independence. The erection of the Great Pyramids, which so many writers have appealed to as an indication of the highly civilised state of Egypt, is in fact a striking proof that before this period the nation had made very considerable progress in the arts and sciences.

But at a period of about fifty centuries anterior to the present time the people had already commenced to degenerate. As Herder remarks, can any one conceive the dire state of misery and the utter degradation into which the masses must have fallen before it became possible to employ them in erecting such tombs? A mournful civilisation must that have been, which employed thousands of men for years in transporting a few blocks of stone! The slavery of the Egyptians, attributed to Joseph by the Hebrew writers, must have been effected long before that time, to enable the kings and priests to employ them on such works. The land and its inhabitants had already become the property of the Pharaohs; under these masters the people sank to the level of a mere herd of cattle.

Like the Nile, the Egyptian civilisation conceals its source in regions hitherto unknown, and, in times antecedent to King Ménes, whom the annals state to be the founder of the empire, the hieroglyphics show the *Hor-chesou*, or "servants of Horus," also engaged in raising monuments in Egypt, according to plans traced on gazelle skins. The social state of the people inhabiting the banks of the Nile at this period is unknown; but the most ancient buildings that they have left us, notably the step pyramid of Saqqarah, and the temple of Armakhis near the great sphinx, assuredly prove that they already possessed a well-established civilisation. No other Egyptian statue is more lifelike or approaches nearer to the high artistic standard than that of Khephren, although it is one of the most ancient.

In the earlier times of Egyptian history, the paintings which cover the walls

of the necropolis show that the philosophy of the Egyptians was humane and rational, and, as Mariette remarks, it in no way resembled the mystical fetishism which sprang up in Thebes twenty centuries later. From all points of view the most perfect epoch is precisely the most ancient that is known to us. When Egypt entered upon one of those periods of warlike rule which so many persons still consider the indication of true greatness, the Egyptian sovereigns were enabled to use for their conquests the effective power which their armies had already acquired during the course of a long-established culture. Their empire already extended far beyond the natural limits of the Nilotic basin, even far into Asia. According to Mariette and most other Egyptologists, the monarchy of the Pharaohs, at the time of its greatest extent, embraced the whole region comprised between the equatorial countries of the Upper Nile, the shores of the Indian Ocean, and the mountains of the Caucasus.

But warlike expeditions are always the forerunning sign of decadence. Under the rule of the conquering Ramses II. the decline became rapid, and the latter part of his reign is marked by barbarous works, and sculptures "of a most extraordinary coarseness." The force derived from a superior civilisation ended by exhausting itself, and Egypt was conquered in her turn, and for more than twenty centuries she has never ceased to be under the rule of foreign dynasties.

PRESENT SOCIAL AND POLITICAL POSITION.

The political and social destiny of the cultivators of the Egyptian soil is clearly indicated by the surroundings amidst which they live. The Nile, the common property of the nation, floods all the land at the same time; and before it had been surveyed by geometricians, the land itself should also have been rendered common property. The irrigating canals, which are indispensable for cultivation beyond the limits attained by the annual floods, can be dug out and kept in order only by multitudes of workmen labouring in unison.

There is, therefore, only one of two alternatives to be accepted by the agriculturalists, either to unite together in a commune, or else to become the slaves of a native or foreign master. During the course of written history, the latter alternative is that which has been realised, whatsoever may have been the apparent prosperity of the country under the sway of the Pharaohs, the Ptolemies, and the Sultans. The bas-reliefs of the monuments show us the Egyptian of three thousand years ago bowed down beneath the lash, just as they are at the present day. The victim of a continual oppression, and an excessive extortion, the fellah is unable to shift his quarters like the nomad Bedouin. In the vast level plain of the delta, or in the narrow valley of the river, there is not a single retreat in which he can hope to find a refuge from his taskmasters. Although his misery is without issue and his future without hope, still he passionately loves the land of his birth. Away from the banks of his beloved river, the fellah is overwhelmed by sadness and dies of home-sickness. The most commonplace landscapes are still the most beautiful in the eyes of their inhabitants.

For nearly a century the conquerors of western Europe have disputed the possession of Egypt, which was even in 1672 spoken of by Leibnitz as the natural centre of the Old World, and the key to all the colonial possessions on the shores of the Indian Ocean. The vital importance of this commanding position could not fail to be observed by statesmen who were contending for the possession of the Indian peninsula. Had the armies of the French Republic succeeded in retaining Egypt, which they had so rapidly overrun, there would have been an end to British rule in Hindustan, and England would have lost the inheritance of the Great Mogul. But after the destruction of the French fleet in Aboukir Bay, Great Britain, resuming undisputed possession of the ocean highways, again became in her turn the mistress of Egypt, without even having the trouble to conquer it, and the French were obliged to withdraw after two years of occupation.

To the clash of arms succeeded diplomatic manœuvres and incessant struggles for obtaining the upper hand at Cairo and Constantinople. At the time of the inauguration of the Suez Canal, which opened up a direct route for steamers to India, and was the work of a French engineer, France at last seemed on the verge of obtaining a kind of suzerainty over Egypt. But England, concentrating all her efforts to secure this highway to India, has finally succeeded in acquiring political possession of Egypt, just as she has secured to herself the commercial pre-eminence over the canal between the two seas. Officially, England intervenes only to advise and assist the sovereign, but in reality her envoys are not far from being the absolute masters of the land. They draw up the treaties, declare war, and conclude peace, distribute places and pensions, dictate the sentences to the magistrates. But they leave the authority to the Egyptian officials, when it is necessary to sanction lists of taxes or to undertake affairs for which it does not suit them to be responsible.

It may be said that the Nile basin, with its 40,000,000 inhabitants, has for a period, more or less extended, virtually become part of the vast British Empire. Although the English generals have scarcely any army at their disposition, mercenaries of all nations will be found ready to assist them in finishing the conquest of the country, in recent times commenced on behalf of the Khedive and the Sultan by Munzinger, Baker, Gordon, Gessi, Stone, Prout, and others.

But the military difficulties attendant upon the annexation of this country will not be the only ones that Great Britain will have to deal with. Even should the other European powers assist England in consolidating her supremacy in Egypt, this authority would not be supported, as in most other English colonies, by the co-operation of a population of British origin. Those amongst the foreigners settled in the country who dispose of the financial resources, establish industries, conduct the papers, and guide public opinion, are mostly Continental Europeans, Italians, Frenchmen, Greeks, and Austrians, whose interests and aspirations are often antagonistic to those of the English. These European immigrants, much better preferred by the natives to the phlegmatic Englishman, who will always be prevented by the climate from founding colonies properly so-called, form in the towns an ever-increasing community, which already numbers nearly 100,000

persons, and which will not fail to act as a check on the exercise of British power.

Undoubtedly the new masters possess a certain means by which they can make themselves, if not loved, at least respected by the people. For they have it in their power to restore the land to its cultivators, to rescue them from the usurers who absorb their substance, to assure them an impartial justice, and to leave "Egypt more and more to the Egyptians." But what Government ever possessed this virtue of gradually effacing itself? Will that of Great Britain set the example? If the solemn and reiterated affirmations of the heads of the English Government are to be believed, their only ambition is to re-establish order in the finances and government of Egypt, and then, this pious work accomplished, to withdraw, leaving their successors to follow the good example they have set.

GEOGRAPHICAL EXPLORATION.

Connected as it is with the circle of attraction of European politics, Egypt is naturally one of the best-explored countries of the African continent. At the time of the French expedition towards the end of last century, the numerous scientific men who accompanied Bonaparte, Desaix, and Kleber, thoroughly studied the land from the various standpoints of its mineralogy, geology, the history of the soil, hydrography, annals, architecture, manners and customs, and the social economy of the country, and their joint labours still constitute the most considerable scientific monument which exists regarding the lower Nile valley. The general map, which they drew up to the scale of $\frac{1}{100000}$, has also remained in many respects the most complete that we possess, notably for Upper Egypt, or Saïd. The smaller map that Linant de Bellefonds, Director of Public Works in Egypt, caused to be engraved, is another valuable document.

But, beyond the salient features of the country, defined by the rocky backbone which bounds the verdant plains, the outlines of the land change yearly, and any local maps, drawn up with the greatest care during the preceding generation, would have to be nearly entirely recast. On one hand the slopes of the Nile have been eaten away by the water; on the other, alluvial deposits have been developed, which the fellahîn have already embanked and commenced to cultivate. Choked up canals have been replaced by other irrigating channels, whilst routes and villages have changed both locality and name. The special maps, made for the survey of the great domains, constantly assign them different outlines.

On the other hand, the "Arabian" and "Libyan" deserts are still unknown, except along the track of a few explorers, on one side between the Nile and the ports of the Red Sea, and on the other in the direction of the oases. It is time that the country in which Eratosthenes, more than two thousand years ago, first measured an arc of the meridian, should at last possess a network of geodetic measurements with which all the local maps might be connected.

But most Egyptian explorers have studied the ancient history of the people rather than their present life and the special geography of the country. When



SECOND, THIRD, AND FOURTH PYRAMIDS.

Champollion's discovery revealed the mystery of the hieroglyphics so long and so earnestly sought for, and when the savants were able at last to decipher the inscriptions which cover in thousands the walls and columns of the immense architectural library of Egypt, they plunged with rapture into this hitherto almost unknown field of inquiry. To the works of Herodotus and of the Greek geographers were now added still more precious documents, the so-called "tables," and the papyri written forty centuries ago by the Egyptians themselves.

Thanks to the investigations of Mariette, now continued by M. Maspero, and thanks to the interpretations of Lepsius, Birch, Chabas, Emmanuel de Rougé, Dümichen, and so many other Egyptologists, the history of the ancient land of the Nile is being gradually reconstituted. The Western nations are beginning to become acquainted with the private life, the deep moral character, and as it were the very soul of this people, from whom they have inherited such a large part of their ideas.

Whatever may be said to the contrary, great changes have taken place since the times represented on the oldest monuments. Doubtless the same type of face and figure may be found amongst many descendants of the Retu, and even fashions have survived, if not amongst the Egyptians at least amongst the Nubians whom they had subjugated. The art of husbandry has not been modified, at least amongst the peasantry, and as formerly "the unchanging temperature of Egypt endows the people," as Bossuet has remarked, "with solid and constant minds." But the series of historic events could not have been accomplished without producing a corresponding effect on the Egyptian people; immigrants of all races have completely modified the urban civilisation. After acting as the teacher of the surrounding nations, Egypt had to be taught in her turn, and the Romans, Byzantines, Arabs, and European peoples successively became her masters.

EXTENT AND POPULATION.

Egypt may possibly now possess a smaller population than she did when at the height of her power; but towns and villages have always been numerous on the banks of the Nile, and they follow in close proximity along the banks of the river, as in the time of Herodotus. In comparison with its extent of arable land, Egypt possesses one of the densest populations in the world. Indeed, Egypt proper consists entirely of lowlands which could be brought within the zone of irrigation. The rocky or sandy tracts which stretch beyond the valley of the Nile form a portion of Libya on the west, or of "Arabia," as it is called, on the east. The narrow strip of "golden thread," with its "fringes" in the delta, composes the whole of the domain of the fellahin, and the only inhabitable spots beyond these limits are a few oases to the west, and the pasturages found in the eastern uplands. The triangle of the delta and the winding river valley, which a pedestrian traverses easily in a few hours, provided he can find a boat in which to cross the Nile, compose all the rest of the country, which Amru described to the Caliph Omar in these words: "Imagine an arid desert and a verdant plain between two mountainous ramparts; that is Egypt."

Egypt is officially said to possess a superficial area of 400,000 square miles, omitting the Asiatic possessions beyond the Suez Canal, but including all the Nilotic region between Assuan and Wady-Halfa. The population of 6,800,000, according to the census of 1882, would be very small in proportion to this immense space, much less, in fact, comparatively speaking, than that of Scandinavia. But the inhabitable part of Egypt, resembling in shape a triangular kite with a long sinuous tail, is scarcely 12,000 square miles in extent, which gives the country a density of population three times greater than that of France, and even superior to that of Belgium and Saxony.

Egypt is the Nile, and its very name is that by which the river was formerly known. The most ancient name of the country, that of Kem, or Kemi, that is to say, "Black," also comes indirectly from the Nile, because it was derived from the violet tint of the alluvia deposited by the current, forming a contrast with the "red" sands and rocks of the desert. The term Kam, or Kham, applied to the African peoples in Genesis, is probably nothing more than the name of Egypt itself.

From this black soil, composed of fluvial deposits, spring forth the nutritive plants; whilst, according to an ancient legend, man himself issued from it. All the towns and villages of Egypt are disposed along the banks of the river and its canals, depending for their existence on its life-giving waters. Communications between Upper and Lower Egypt could recently be effected only by the Nile, which is easily navigable, since boats ascend and descend with equal facility, either driven up stream by the north wind, or else drift down with the current. Shipwrecks or prolonged stoppages are likely to occur more especially at abrupt turnings, and on navigating the ravines, whence irregular winds sweep across the course of the stream.

THE ARABIAN OR COAST RANGE.

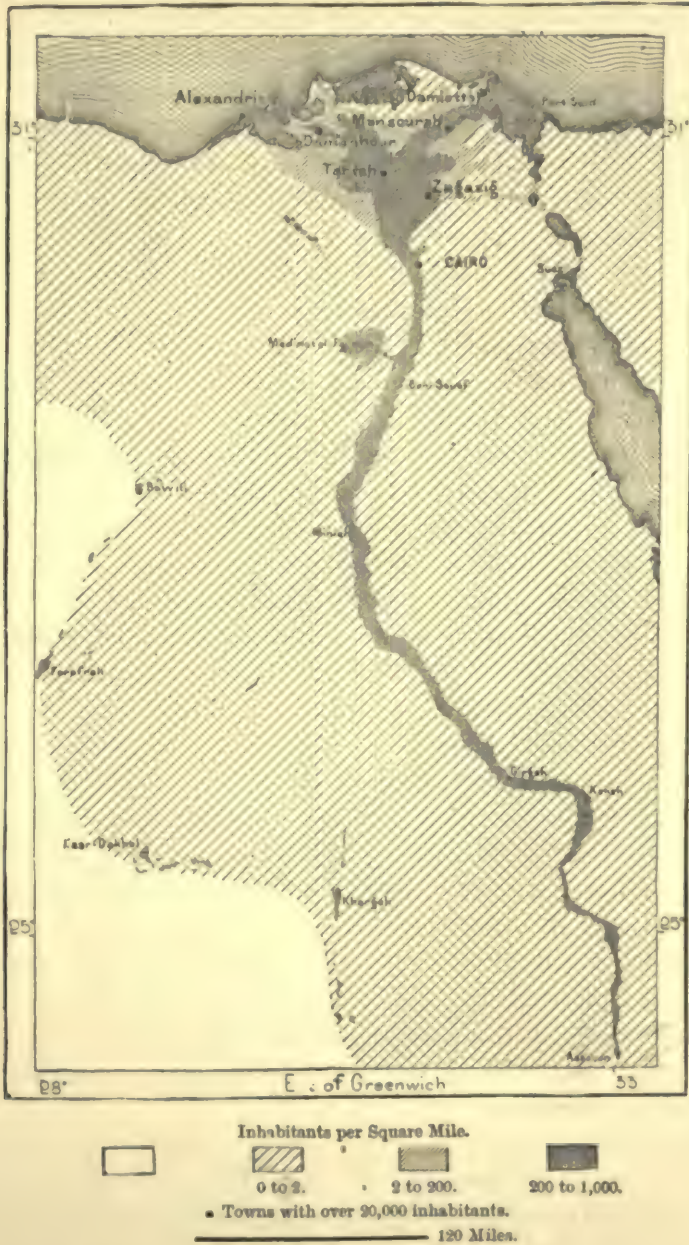
Here and there, from Assuan to Cairo, the banks of the Nile are commanded either by the slopes of mountains, or by the edges of plateaux, whose height ranges from 300 to 2,300 feet. From these heights a whole section of Egypt lies at the feet of the traveller, from the eastern to the western frontier, with all its villages, canals and cultivated lands. Lower down the yellow walls of the rocks in many places bear the aspect of quarries, whose cleared spaces are now laid out in garden-plots. It is especially towards the east that the cliffs here and there assume an imposing appearance, although nowhere rising to any great elevation.

The traveller must penetrate some distance from the Nile to the neighbourhood of the Red Sea before he reaches the coast range or border chain, which, however, has been very imperfectly explored. It forms a northerly continuation of the Etbaï range, some of whose peaks are said to attain a height of considerably over 6,000 feet. These highlands of the Arabian desert, commonly spoken of simply as El-Jebel, or "The Mountain," consist of crystalline rocks, such as granite, gneiss, mica schist, porphyry, and diorite. They are disposed in several distinct groups, separated from each other by the ramifications of sandy wadies. One of these

groups in Southern Egypt gives rise to the transverse chain of the Cataracts, which forms the northern frontier of Nubia proper, and merges near Assuan in the Libyan range. In the syenite and granite formations, here skirted by the rapids,

Fig. 95.—DENSITY OF THE POPULATION OF EGYPT.

Scale 1 : 6,500,000.



are situated the famous quarries, now abandoned, where the Pharaohs procured the materials for their obelisks, statues, and other huge monolithic blocks. Towards the east the same group of hills, whence springs the chain of the Cataracts,

advances into the Red Sea in the form of a triangular peninsula, terminating in the Ras-Benas headland, and sheltering on the south the gulf of Umm-el-Ketef, identified as the ancient port of Berenice.

North of the Nubian frontier, where the crystalline rocks occupy the whole breadth of Upper Egypt, the zone of granitic formations is gradually narrowed, while still maintaining its chief elevations in the neighbourhood of the coast. This region, now frequented only by a few scattered nomad tribes, was formerly worked for its mineral wealth by numerous gangs of miners and quarrymen. The Jebel-Zabarah, the Smaragdus of the ancients, which rises on the Red Sea coast, under the latitude of Edfu, contains in its veins garnets and other valuable crystals; and in the year 1816, Cailliaud here discovered the beds of emeralds, which though far from abundant and of rather indifferent quality, were worked by the sovereigns of Egypt down to the year 1358. North and south of the mountain are still visible the remains of the villages erected by the miners.

Farther north, in the depression which runs from the Nile at Keneh to the port of Kosseir, and near the Hamamat wells, have been discovered the remains of a town of two thousand inhabitants, built of stone, and not far off vast quarries of "verde antico," of "Egyptian breccia," and of other varieties of diorite, which were used especially for cutting vases, sarcophagi, and statues. Still farther north follow the two groups forming the ancient Mount Claudian, now severally distinguished as the Jebel-Dokhan and the Jebel-Fatireh, the latter granitic, the former porphyritic. The monoliths hewn out of these hills were conveyed down to the coast of the Red Sea, and thence transported by the Suez Canal, or "Trajan's River," to the Nile, and so on to Alexandria, and there shipped for all the Mediterranean cities of the Roman world. The Jebel-Dokhan, or "Smoky Mountain," the "Porphyrites Mons" of the ancients, contained a group of quarries, which during the Roman epoch was more actively worked than any other in Egypt, although the Egyptians themselves had never quarried this close-grained stone. Since the reign of the Emperor Claudius, Rome and Byzantium continued to import the admirable red porphyry, which was used in the erection of their temples and palaces. Here are still found columns 58 feet long, and 24 feet in compass, hence larger than the largest block in "Pompey's Pillar." The Arab invasion of Egypt put an end to the operations carried on at these famous quarries, whose site is still indicated by enormous heaps of refuse and the remains of large towns. The porphyry formation of the Jebel-Dokhan crops out in the midst of the granitic rocks, like the analogous porphyries of the Jebel-Katherin amid the granites of the Sinai peninsula.

Over against Mount Tor, on the Sinaitic coast, stands the Jebel-Gharib, whose granite peaks rise to an altitude of 6,120 feet. This is the last lofty summit of the border range, and according to Schweinfurth, it forms the culminating point of the whole Arabian desert. So abrupt are its sides that it seems quite inaccessible.

In the distance are visible Mount Tenareb and the Jebel-Shellalla, the latter separated by the Wady-el-Tih from the Jebel-Attaka. All the mountain groups in this region are distinguished by numerous pyramidal crests, whose spurs are

similarly disposed in pyramids grouped symmetrically round the central cone. These uplands, which do not exceed 1,000 feet in altitude, and which are indebted for their imposing appearance to their abrupt walls falling precipitously down to the Gulf of Suez, form the northern extremity of the granitic system. Farther north, nothing occurs except limestone rocks or sand dunes. Both slopes of the range are also overlaid with layers of more recent formation. On the east side cretaceous taluses are found in many places resting on a granite foundation, and

Fig. 96.—ASSUAN: ANCIENT QUARRY, NOW ABANDONED.



several of the headlands along the coast belong to these cretaceous formations. Here also occur deposits of sulphur, as well as naphtha springs and beds of bitumen. Basaltic eruptions occurred at some remote period in the Jebel range, and these lavas are visible as far as the neighbourhood of Ismailia.

GEOLOGY OF THE COAST RANGE.

On the coast the prevailing rocks are sandstones and limestones of contemporary formation, in which are embedded fossil shells and polyps. Some more recent sandstones and limestones of like origin are entirely formed of these animal remains.

As on the Arabian seaboard, a gradual movement of upheaval has been observed

along the Egyptian coast, produced either by the vertical rising of the land or by the subsidence of the surrounding waters. Altogether the west coast is more healthy and less obstructed by coral reefs than the opposite side. The sea is also deeper near the shore, and good harbours are consequently more numerous.

West of the granites, schists and porphyries of the border range, the rocks overlying the crystalline nucleus consist of sandstones and limestones. In the southern district rises an isolated sandstone mass resembling those of Nubia, Kordofân, and Senâr. This rock, especially at the Jebel-Silsileh between Assuan and Esneh, is very close-grained and disposed in regular layers, rendering it peculiarly suitable for the erection of large buildings. Hence from this source have been obtained the materials for the construction of thousands of temples and other structures. The breaches made by the ancient quarrymen in the rocks on the right side inspire a sort of awe by their prodigious dimensions. According to Charles Blanc, these mountains supplied the building stone for at least half of the old Egyptian monuments.

The quarries on the west side, although less extensive, are more remarkable from the artistic point of view, for they contain several temples excavated in the live rock, as well as sepulchral caves and statues. Scarcely had the quarries been opened when they appear to have been converted into tombs.

In the northern section of the Arabian range the sandstones are replaced by limestones of various dates, some belonging to the cretaceous, others to the eocene epochs. To these chalk formations chiefly belong the cliffs stretching along the right bank of the Nile, which present the most varied and picturesque forms of monumental aspect, separated by mere fissures or by gloomy ravines, and often crowned with fantastic towers and pyramids.

In the extreme north the last hills, terminating at Cairo itself with the Jebel-Mokattam, or "Inscribed Mountain," are composed almost entirely of nummulites—ostræa, cerithium, and other shells massed together in a limestone conglomerate. Owing to the abundance of their fossils, they have become a sort of Eldorado for geologists. These nummulitic strata include in some places transparent alabasters of the choicest quality. Such are, west of Beni-Suef, those of the Jebel-Urakam, whence have been derived the materials employed in the construction of Mohammed Ali's mosque in the citadel of Cairo. Such are, also, farther south the alabasters, which take their name from the city of Alabastron, whose site was not far removed from the spot now occupied by the town of Minieh.

But more important than these costly marbles are the quarries of building-stone skirting the Nile, especially those of Turah and Masarah. From the vast pyramids erected on the opposite side of the river some idea may be formed of the excavations begun six thousand years ago in these nummulitic limestone quarries, which also supplied the building materials for the cities of Memphis and Cairo.

THE LIBYAN PLATEAU.

The Libyan hills are lower than those skirting the right side of the river. Taken as a whole, the relief of Egypt presents the character of a plane inclined in the direction from east to west. From the crest formed by the coast range the highlands and plateaux diminish gradually in height down to the Nile Valley. From the western edge of this valley the ground also falls until at last it sinks below the level of the sea.

On both sides of the strip of verdant and inhabited land fringing the Nile the zone of rocks is alike destitute of permanent dwellings. But the Libyan region being more uniform, void of lofty eminences and covered with sand, presents a more desolate appearance than the eastern zone. It already forms part of the great desert, which stretches thence westwards right across the continent to the Atlantic seaboard.

Seen from the pyramid of Cheops, this Libyan plateau might seem to be nothing more than a boundless plain varied only by sand dunes. But this is merely the effect of an optical delusion, as we are assured by the few travellers who have ventured to penetrate into these dreary solitudes. Taken as a whole, the desert comprised between the Nile and the depression of the oases is a plateau of nummulitic limestone rising to a height of 830 feet above the river level. The limits of this plateau are indicated by escarpments, while its surface is disposed in distinct sections by the erosive action of old marine waters. Hillocks of uniform elevation rising here and there above the plain serve to indicate the primitive level of the land. The base of all these promontories was undoubtedly washed in pre-quaternary times by the Mediterranean, whose waves were broken into surf amid these rocky archipelagoes, where at present water appears only in the form of delusive mirages.

THE MIRAGE.

Nowhere is this remarkable phenomenon of the mirage seen to greater advantage than in the Libyan and Arabian deserts. It often assumes the most weird and fantastic forms, the outlines of lovely landscapes, hills and valleys, verdant plains, everywhere interspersed with the treacherous appearance of broad lacustrine basins, glittering under the torrid rays of the tropical sun. And so vivid are these scenic effects, that the most experienced travellers, and the animals themselves, are at times deceived by the pleasant phantom and thus beguiled to their destruction.

When crossing the Arabian Desert in the year 1883, Colonel Colborne tells us that on one occasion the mirage was intensely real. Before him stretched a large lake, its blue waters laughing in the sun, studded with gem-like islets clad in verdure, and bordered by castles, high pinnacles, turrets, and battlements, and again by gleaming villages and smiling hamlets—the whole scene fairylike in its beauty, while presenting a most painful contrast to the arid sand and fierce heat and consuming thirst from which the traveller was suffering. It is in vain that we rub our eyes and seek to disabuse ourselves of the illusion. The spectacle lies before us

undeniable, apparently solid and tangible. We know it is mocking us, like an *ignis fatuus*; but the most accurate knowledge of the physical laws which govern the phenomena will not brush the image from the retina.

There is little wonder that the ignorant and inexperienced should have frequently yielded to the delusion. But life is always the price paid for such a mistake. Some years ago a company of soldiers perished from thirst in this very region. Disregarding the warning of their guides, the unfortunate men, fresh from Egypt, and mad with thirst, broke from the ranks and rushed towards the seeming lakes of transparent water which were presented to their eyes on all sides. They pressed on eagerly towards the ever-receding phantom, and one by one fell prostrate, to leave their bones to bleach on the sands. On another occasion a detachment was sent across the desert to Berber on its way to Khartum. The soldiers, refusing to be checked by the guides, consumed all their supply of water when in sight of the El-Bok Mountains, confident of their ability to reach the imaginary lake. The heat was intense; the men grew faint and in a few hours died one by one in horrible agony. It is not surprising that by the Arabs this strange phenomenon should have been named the *bahr-esh-Sheitan*, or "Devil's Sea." *

GEOLOGICAL FEATURES.

The surface of the Libyan desert is completely covered with sand, which accumulates in vast quantities in the depressions, leaving only the higher rocky eminences partly exposed. In few places are the cliffs absolutely bare, being almost everywhere clothed with the yellow or reddish particles of disintegrated quartz. These quartzose sands are certainly of foreign origin, for the plateau itself presents nothing but limestone rocks and clays. These remains of primitive rocks have been brought from distant uplands by the action of the winds and, possibly, also of marine waters. By their ceaseless movement over the surface the shifting sands have imparted a remarkable smoothness to the surface rocks, which in many places exhibit the lustre of polished marble. All the scattered blocks are, as it were, varnished by the sand, which has rounded off their angles and softened their rugged outlines. Some of these boulders have thus acquired such brilliancy that observers have mistaken them for volcanic obsidians.

The geologist Zittel supposes that the incessant friction may even have tended to produce a chemical modification in the very structure of the rocks; for a large number of flints are met, in the centre of which is embedded a core of nummulitic limestone. Hence the stone has been apparently transformed from the outside inwardly, a phenomenon which can be attributed only to the constant friction of the sand on the surface. Amongst the myriads of nummulites covering the ground in dense layers, all those occurring on the surface have by this action of the arenaceous particles been entirely changed to flints, assuming a bluish or even a metallic appearance, whereas those lower down, being protected from the friction as well as from the action of light, remain white and retain their limestone formations.

* "With Hicks Pasha in the Sudan," p. 244.



LIBYAN DESERT—MIRAGE ON THE HORIZON.

But whatever be the chemical forces that have converted the nummulites into flints, these do not remain intact after their transformation. The vicissitudes of the temperature, which beneath these cloudless skies varies so greatly between day and night, cause the stones to chip, strewing vast spaces with their fragments. Occasionally the breakage of these flints is effected in such a way as to give them a perfectly regular form. Thus in a wady of the Arabian range west of Beni-Suef are met, scattered about in considerable quantities, siliceous fragments resembling truncated cones and presenting eight symmetrical facets.

To the sudden changes of temperature have also been attributed the broken and even-worked flakes that have been found in various prehistoric workshops throughout Egypt. But human labour is so clearly stamped on these specimens that it is quite impossible to confound them with the products of natural causes. In the Libyan desert Zittel sought in vain for any naturally produced siliceous chippings bearing even a remote resemblance to the spear and dart heads worked by the men of the stone age, whether in Egypt, Europe or the New World. Amongst the stones of regular form found in the Egyptian deserts, Cailliaud and Russegger were the first to call attention to the carnelians, jaspers, agates, and other hard stones presenting the form of lentils or discs of various dimensions, encircled by a round ridge somewhat like a ring. The interior of these natural specimens is often disposed in concentric circles, and such concretions are very frequently found associated with fossil wood.

THE EGYPTIAN PETRIFIED FORESTS.

By a remarkable contrast, petrified trees are known to occur in many parts of a region where living plants have become so very rare. On the east slope of the Jebel-Mokattam, not far from Cairo, is found, if not a "petrified forest," as it is usually called, or "masts of shipwrecked vessels," pierced with holes by phollades, and covered with marine deposits, as the early travellers pretended, at least a number of stems transformed to blocks of flint or chalcedony. But by penetrating farther into the desert we come upon far more extensive petrifications, which might really deserve the name of "forests." In a depression of the Arabian plateau, to the south-east of Cairo, the trunks of trees of all sizes are found in such multitudes that certain tracts are exclusively covered with the siliceous stems or fragments of fossil wood.

In the Libyan desert, west of the Pyramids, other "petrified forests" contain stems over sixty feet long, with their roots and branches, and even with the bark still perceptible in some places. Travellers have also discovered similar masses of fossil wood in various parts of the Nubian desert, in Senâr and Kordofân, and even on the upland plateaux of Abyssinia. In all these regions the vegetable remains so petrified belong to the order of the *sterculiaceæ*. In Egypt the prevailing variety is the *nicholia Nilotica*, and a species of bamboo obtained from these forests is also preserved in one of the natural history collections in Cairo.

Whence come all these stems of petrified trees? Some geologists have suggested that they may have been washed up by the sea at a time when the Mediterranean

penetrated much farther southwards than at present. But in that case it is difficult to understand how these fossil woods could have been stranded in such a good state of preservation, and, moreover, without being associated with any of those vegetable or animal marine organisms which are always found adhering to driftwood. Nor is any theory advanced to explain how this flotsam and jetsam could have been borne over lofty mountains to the upland plateaux of Abyssinia.

On the other hand it is impossible to suppose that these petrifications can have been brought down by fluvial currents such as that of the Nile, because they are nowhere associated with any alluvial deposits. Hence these *sterculiaceæ* of the Nilotic basin must be regarded as still *in situ*, or at least in the immediate vicinity of the places where they originally flourished. The opinion which finds greatest favour with geologists is that the vegetable fibres were gradually petrified under the action of thermal waters, such as still occur in various parts of Egypt, and especially in the region of the oases. Becoming saturated with these waters, the fallen trunks would be gradually changed to stone, just as they become converted into peat or turf in the swampy districts of more northern latitudes.

Doubtless the petrifications of herbs and other vegetation at present going on round about the geysers of Iceland and of Montana in North America, differ from those of the Egyptian deserts in their general appearance and process of formation, for in these districts the plants are changed not into particles of quartz but into amorphous flints. But allowance should, perhaps, be made for climatic differences and for the long action of time. Close to the "petrified forest" of Cairo is observed a dome-shaped sandstone hill, the Jebel-el-Ahmar, or "Red Mountain," the interior of which is easily quarried, thanks to the softer character of the deeper strata. May not this sandstone hill, isolated amid the surrounding nummulitic limestones, have been gradually accumulated by the action of some ancient geyser? And to the similar action of thermal springs may we not attribute the preservation of the trees on the neighbouring plain, which at that time was doubtless thickly wooded?

THE WESTERN OASES.

To the west of Egypt as well as to the west of Nubia a chain of oases is developed which describes a curve almost parallel to the course of the Nile. The first of these oases is that of Kurkur, which although scarcely more than 60 miles from Assuan, has never been inhabited. At about the same distance in a north-westerly direction stretches the so-called "Great Oasis" of the ancients, now known as that of Khargeh, from the name of its chief town. Including the palm-groves of Beris, it occupies a depression stretching north and south for a distance of 90 miles. It does not, however, form one continuous oasis, but rather an archipelago of small oases, a cluster of cultivated islands separated from each other by intervening tracts destitute of vegetation.

West of Khargeh lies the oasis of Dakhel, or Dakleh, that is to say, the "Interior," also known as the Wah-el-Gharbieh, or "Western Oasis." Dakhel is

separated by a limestone wilderness, partly covered with shifting sands, from the oasis of Farafreh, which is situated 120 miles to the north-west. The labyrinth of rocks occupying the intermediate space between Dakhel and Farafreh is one of the most remarkable formations of the kind in the whole world. The narrow fissures winding along and intersecting each other at various angles amid the still preserved upright rocky masses resemble the streets of some weird city lined with fantastic monuments, pyramids, obelisks, triumphal arches, sphinxes, lions, and even statues faintly reproducing the outlines of the human figure. One of the natural gates on the north side of this uninhabited city has by Rohlfs been named the Bab-el-Ismund, in honour of a fellow-countryman. A still more colossal gateway, which stands at the outlet of the labyrinth facing the Dakhel oasis, is known as the Bab-el-Cailliaud, in memory of the first European traveller who in recent times has penetrated into these inhospitable regions.

Several oases of smaller size are scattered round about the Wah-el-Farafreh, forming an archipelago which is prolonged in a north-easterly direction by the oasis of Bakharieh, probably the "Little Oasis" of the ancients. It is one of those lying nearest to the Nile, being situated not more than 90 miles from the plains of Minieh in the fluvial basin. But in this district the series of depressions ramifies in two different directions. One branch continues to develop itself parallel with the Nile, while the other follows the line of the Mediterranean seaboard west of Alexandria. Its axis intersects the depressions of the Bahr-Belâ-mâ, or "Waterless Lakes," and other dried-up lacustrine basins, ultimately terminating in the oasis of Siwah, formerly consecrated to Jupiter Ammon.

North of the Siwah depression rise the rocky escarpments of the plateau of Cyrenaica, while towards the south an isolated system of coarse limestones is encircled by lofty sand dunes. In this region bordering on the sea and already comprised within the zone of winter rains, the water develops vast lacustrine basins, all saturated with salt. Amongst them is the extensive Lake Sittra, which floods the lowest part of a depression lying midway between the Bahr-Belâ-mâ and the Siwah oasis. But this "sparkling sapphire set in gold," as it has been described, merges in one direction in dreary morasses. Other cavities are now empty. Excavated in the form of wells to a depth of from 60 to 150 feet, they still retain at the bottom a deposit of mud mixed with salt and gypsum. Springs even continue to bubble up in some; but the banks of these saline waters are everywhere destitute of vegetation. In the dried-up lacustrine hollows nothing is seen except a little scrub in places where the saline efflorescences have been overlaid by a thick layer of drifting sands.

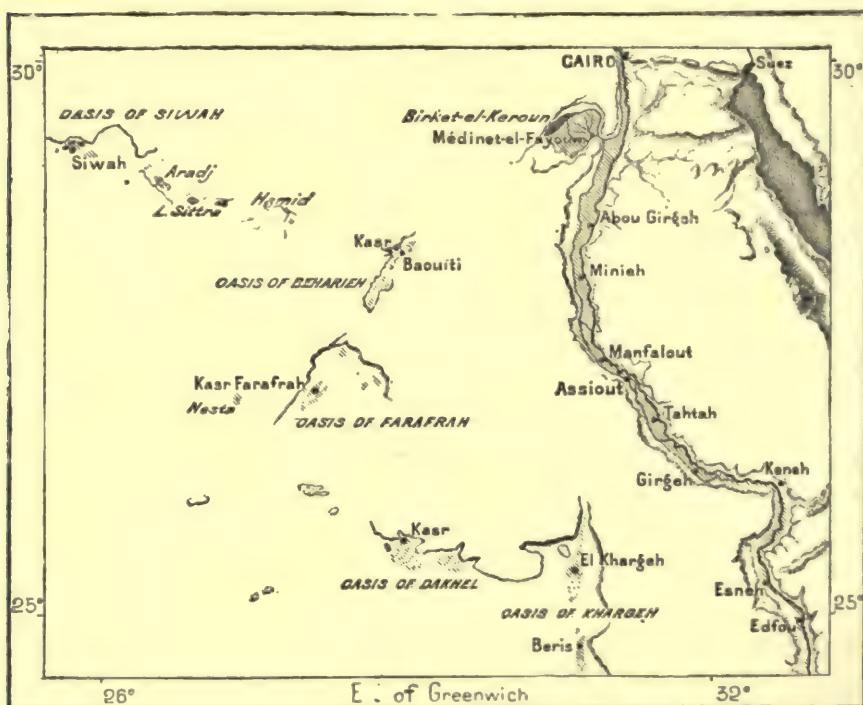
Not far from Lake Sittra stretches the now-abandoned oasis of El-Araj, which is being gradually swallowed up in the sands. The outer zone of plantations has already partly disappeared; the half-choked-up wells now contain nothing but a scanty supply of brackish water; and the time is rapidly approaching when the only evidence of the former residence of man in this district will be tombs in the Egyptian style excavated in the neighbouring cliffs.

THE SIWAH OASIS.

The Siwah oasis, where spoke the renowned oracle of Ammon, consulted on one occasion by the Macedonian conqueror, rivals in beauty that of Dakhel, although the limestone hills forming its outer enclosure cannot be compared with the picturesque heights of the Bab-el-Cailliaud. Nevertheless they present scarcely less fantastic forms. In certain parts of the plateau the cliffs terminate in flights of steps with perfectly horizontal slabs and of uniform depth, like those leading to some palatial structure. The strange effect is heightened by the colour of the stone, which contrasts vividly with the white sand strewn over the steps. In the

Fig. 97.—CHAINS OF OASES WEST OF EGYPT.

Scale 1: 7,500,000.



depression enclosed by these remarkable cliffs the steep heights rise to the level of the plateaux, of which they originally formed an integral portion. They now stand isolated amid the cultivated plains and palm-groves, some crowned with edifices, others disposed in ramparts and turrets presenting the appearance of fortifications. The blue lakelets scattered over the verdant plain impart to the oasis of Jupiter Ammon the aspect of a pleasant retreat from the interminable wilderness. But the traveller's anticipations are presently dashed by the brackish taste of the waters and by the miasmatic exhalations rising from the surrounding marshy tracts. Near the saline springs flow some streams of fresh water, though

for the most part thermal; other waters contain sulphur, while the so-called fountain of the "Sun," said to be alternately cool in the middle of the day and warm at night, has really a nearly uniform temperature of from 84° to 85° F. It has been identified with the spring still flowing at some distance from the temple of Um-beidah. At the same time it is easy to understand that, in the absence of precise measurements, the ancients may easily have been deceived as to its real temperature, and thus suppose it cold by contrast under the burning sun, and hot during the chilly nights.

With the date groves of the oasis are intermingled the olive, the apricot, the pomegranate, the plum, and the vine, while the clearings are planted with onions. Although annexed to Egypt in 1820, Siwah is rather a geographical dependence of Cyrenaica; for it is connected with the slopes draining to the Gulf of Sidra by the Faredgha oasis and by other verdant islets surrounded by rocky and sandy wastes.

Towards the north another depression in the plateau on the route to Alexandria is occupied by the oasis of Gara, which is inhabited by some forty persons. According to a local tradition this number of forty cannot be exceeded, death inevitably re-establishing the equilibrium whenever disturbed by an excess of births or by too great an inroad of immigrants.

ORIGIN OF THE OASES.

At sight of the chain of oases diverging from the Nile, and winding through a series of valleys and gorges seawards, it was only natural to regard these low-lying and fertile tracts as the remains of some old watercourse, some western branch of the Nile now partly obliterated by the invading sands. The natives have preserved legends recording the gradual desiccation of this waterless stream, and down to a recent period most travellers still sought the traces of the Nile in the oases of the Libyan desert. Even on some contemporary maps the channel of the so-called Bahr-Belâ-mâ is drawn from valley to valley, as if its course had actually been determined by local surveys.

It is in any case highly probable that at some remote geological age fluvial or marine waters, excavating straits and valleys, may have flowed through the region now occupied by the oases. But during the present epoch no branch of the Nile or inlet of the Mediterranean has penetrated into these depressions of the desert, which contain neither alluvia of fluvial origin, nor marine deposits associated with contemporary molluscs. Nevertheless the thermal waters of the oases contain animal species belonging both to the Mediterranean and Red Sea fauna. Such, for instance, are the two little fishes called *cyprinodon dispar* and *cyprinodon calaritanus*.*

But if in their formation the oases are independent of the present Nile, they may possibly be connected with it through the waters which feed their date plantations. Certainly the copious springs serving to irrigate the oases of Dakhel

* Zittel, "Die Sahara."

and Farafreh cannot have their origin in the districts themselves, for rain is here the rarest of phenomena. The natives are thoroughly convinced that these waters are derived from the Nile, and they even pretend to have observed 'a certain increase in their volume during the period of the great inundations. But this would be very surprising considering the great extent of sands which the underground currents would have to filter through. Yet the explorers Cailliaud and Russegger accepted the theory of the natives that the oases derive their supplies from the Nile. But Dakhel being at a much higher level than the main stream under the same latitude, the source of its springs must in any case be sought in the upper reaches of the Nile. They probably come from the southern regions lying within the zone of the tropical rains.

But, however this be, the high temperature attained by the current during its underground passage shows that it must flow at a depth of several hundred yards below the surface of the ground. All the springs have a mean temperature of from 98° to 100° F., and they are utilised as well for the cure of certain maladies as for irrigation purposes. Since the year 1850 their volume has been considerably increased in the Farafreh oasis, thanks to the intelligence of a native, who after travelling with the French engineer Lefebvre, returned to his home, where he sank a number of wells and carried out a regular system of irrigation. Care was also taken to construct underground galleries analogous to the *kanats* and *kharez* of Persia, Afghanistan, and other parts of the Iranian plateau, in order to prevent excessive evaporation. So far the new wells do not appear to have at all diminished the abundance of the old sources, so that the underground supply seems to be practically inexhaustible.

In the oasis of Beris, south of Khargeh, two hundred wells have been choked with the sands. But there still remain twenty-five whose thermal water ranging from 77° to 86° F. is highly ferruginous, and is found only at a depth of 200 feet from the surface. According to the ancient writers some of the wells in the great oasis had in former times been sunk to a depth of over 650 feet. The walls of the shafts are supported by beams of acacia wood affording access to the bottom. But the boring of new wells and the work of clearing the old pits of their accumulated sands are not unattended by danger. After the last layer of sand is pierced, wherever the flow is abundant, as in Dakhel and still more in Khargeh, the water tends to spread out in malarious swamps.

THE NATRON LAKES.

North of the Bahr-Belâ-mâ, and parallel with the series of depressions collectively known by this name, a valley of more regular form running south-east and north-west is occupied in its lowest cavities by seven shallow morasses. These are the so-called "Natron Lakes." Although separated from the nearest bend of the Nile by a shingly desert over 24 miles broad, the El-Natron Valley most probably receives its supply of moisture from the river. During the three months following the autumnal equinox the water, "of a dark blood-red colour," due

perhaps to the infusoria inhabiting it, oozes up to the surface from the east side of the valley, whence it flows in rills and rivulets down to the lakes.

In these basins the waters increase till the end of December, by which time they have attained a depth of about 5 feet. Then they subside, leaving some of the cavities quite dry. Their composition varies with the different basins. In some marine salt prevails, in others carbonate of soda; while the sulphate of soda is intermingled in diverse proportions. Two of the lakes, presenting a reddish appearance when dried up, leave an encircling ring of red or brown salt, which emits the pleasant fragrance of the rose. The decomposition of the marine salt by the carbonate of lime contained in the moist soil produces crystals of soda, which

Fig. 98.—THE NATRON LAKES.

Scale 1 : 250,000.



are deposited in a greyish layer, and which are collected by the natives of Terraneh, a village on the left bank of the Rosetta branch of the Nile.*

A few springs of fresh water, which have their source in the neighbouring rocks, help to support a scanty vegetation, mainly comprising Mediterranean species and a few sickly palm-trees. The only inhabitants of the Natron district are the inmates of the Baramus, Saint Macarius, and other convents founded in the fourth century of the Christian era, at a time when thousands of monks took refuge in the caves and valleys of this rocky and sandy region. Like the old anchorites, the recluses of the Natron Valley are forbidden to consume the pro-

* Natron of the Terraneh lakes, according to Berthollet :—

Chloride of sodium	. . .	52 per cent.	Sand	. . . . .	3 per cent.
Carbonate of soda	. . .	23 „	Carbonate of lime	. . . . .	0.9 „
Sulphate of soda	. . .	11 „	Oxide of iron	. . . . .	0.2 „

ducts of their own gardens, so that all their supplies have to be brought from Egypt. However, the spirit of abnegation has nowadays little to do with the peopling of these monasteries of the wilderness, most of their inmates being in fact exiles condemned to a lingering death.

No remains of ancient monuments are found in these solitudes, with perhaps the single exception of the traces of a glass manufactory, which may be recognised by the ruins of some brick furnaces and the fragments of scoriæ and vitrified sands strewn about. Before the recent events, which have brought about the British occupation of Egypt, it was proposed to survey the region west of the Nile, for the purpose of ascertaining whether it might not be possible to construct a canal from the main stream, or from the Bahr-Yusef to the Bahr-Belâ-mâ depressions, and thus bring 500,000 acres under cultivation.

GENERAL FEATURES OF THE WESTERN OASES.

The level of the oases does not present a regular slope from the frontiers of Nubia to the Mediterranean seaboard. Cailliaud's barometric measurements had already shown that the region of the depressions falls from the Dakhel oasis to that of Farafreh, again rising towards that of Bakharieh, beyond which it sinks in the Siwah district below the level of the sea. The operations executed by Jordan in 1873 and 1874 with more care and with better instruments have confirmed this general conclusion, while slightly modifying the figures given by the French explorer. There is now no longer any doubt that the palm-groves of Siwah stand at a lower level than the Mediterranean, while the oasis of Araj would appear to be even some 150 feet still lower.*

Farther on the chain of oases, which was perhaps a marine inlet during a former geological epoch, is continued south of the plateau of Cyrenaica through the Faredgha, Jalo, and Aujila oases. The whole series seems to be also below the level of the sea, a barrier of reefs and sand dunes alone preventing the marine waters from penetrating into the depression. Its mean level seems to be about 100 feet below the Mediterranean. After having determined this geographical fact engineers began to discuss the project of converting the whole of Cyrenaica into a large island by introducing the sea into the region of the oases. In the same way it has been proposed to create a vast "inland sea" farther west beyond the Syrtes.

The term oasis at once suggests the idea of an earthly Eden, diversified with running waters and verdant plains. By the ancients, the Egyptian oases were called "Isles of the Blest," as if a residence in these palm-groves in the midst of

* Altitude of the oases, according to Cailliaud and Jordan:—

	Cailliaud. Feet.	Jordan. Feet.
Khargeh	345	226
Dakhel	182	330
Farafreh	110	252
Bakharieh	117	376
Araj	—200	—266
Siwah	—110	—120

the wilderness were a special favour of heaven. Nevertheless the sovereigns of Egypt, and after them the Roman and Byzantine emperors, were well aware that these oases were not the happy abodes sung by the poets, for thither they banished their enemies to perish of weariness and inanition. Thousands of Christians, exiled by their fellow-Christians of different theological opinions, yielded to home-sickness in these dreary "convict stations." Some of the oases, amongst others that of Dakhel, possess the romantic beauty imparted by a superb rampart of cliffs, with their fantastic towers and embattlements rising from 800 to 1,000 feet above the hamlets and palm-groves. But the traveller's admiration is, even here, due mainly to the impression of contrast presented by the patches of verdure to the dismal waste of bare rocks and sand encircling them. He is naturally enraptured when, after traversing the waterless desert, the constant sport of the mirage, he at last comes upon real streams of water, flowing beneath the shade of leafy groves. But then comes the inevitable feeling of oppression produced by the narrow limits of these garden-plots, everywhere surrounded by boundless wastes, stretching in all directions beyond the horizon.

THE LIBYAN DESERT.

The sands of the desert form shifting dunes like those on the Mediterranean and Atlantic coasts. Between the Nile Valley and the chain of oases several ranges of these dunes are disposed, nearly all in the direction from the south-east to the north-west, parallel with the course of the river between Assuan and Minieh. The sand-hills do not attain an elevation comparable to those of the French landes; doubtless the laboratory where rocks are weathered into minute particles are more remote, while the winds are less powerful. A few stunted shrubs, especially the tamarisk plant, are the chief instruments employed by nature in binding the sand in compact masses. Behind these obstacles a little heap is formed, the horns of its crescent curving forward with the wind. Soon the plant is enveloped, and would in a short time be entirely swallowed up, if its growth did not keep pace with the rising sands.

Thus are formed hillocks, whose mean height scarcely exceed 12 or 14 feet, and on the crest of which is visible the foliage of a tamarisk or some other shrub. A peculiar physiognomy is imparted to the Libyan desert by these low eminences, which in form and colour resemble eroded cliffs, but all of which bear a plant of some kind on their summits or slopes. The sands do not pass beyond any rocky heights exceeding the mean elevation of the plateau; they are also arrested before the Pyramids on the edge of the limestone rocks skirting the valley of the Nile. Hence arose the otherwise groundless and absurd hypothesis that the huge tombs of the Pharaohs were erected to protect Egypt from the invading sands of the desert.

When the west wind prevails, thousands of small streams of red or golden sands overflow from the rocky battlements of the plateau, forming long ridges which here and there encroach on the cultivated lands. In this way the course of the

Bahr-Yusef has been gradually deflected eastwards by the ranges of dunes skirting the left bank. But the progress of the sands is extremely slow, and may perhaps be compensated by the erosions caused by the action of the current along the right bank of the Nile. Moreover the sands themselves may be cultivated like other lands, wherever they can be brought within the reach of the irrigating waters, bringing down the rich alluvia of the stream.

West of the oases, the Libyan desert has not yet been traversed by any explorers in the direction of the Kufra oasis and of Fezzan. An inhospitable region at least 400,000 square miles in extent, inaccessible even to travellers provided with all the resources of modern industry, occupies this part of the continent, completely separating Egypt and Cyrenaica from the lands comprised within the Tsad basin. The natives of the Egyptian oases are unable to give strangers any information regarding these mysterious and terrible regions bounding their horizon, and into which they are careful not to penetrate. A few confused legends destitute of all historic value are, however, kept alive amongst them regarding strange events supposed to have occurred in these frightful solitudes.

In the year 1874, Rohlfs, Zittel, and some other German explorers, vainly attempted to make their way in a straight line across this region to Fezzan. In anticipation of a long journey they organised a whole caravan of camels, carrying water in iron chests lined inside with tin. But after a six days' march from Dakhel, they became convinced that it would be impossible for the camels to traverse the endless ranges of dunes barring the route in the direction of Fezzan. Hence they turned northwards to seek a refuge in the Siwah oasis. This point was reached twenty-two days after leaving the last watering-place, and throughout the whole of this expedition nothing was met except sand and rocks, and the "devil's water" shown by the mirage.

The part of the Libyan desert lying nearest to the Egyptian oases resembles that skirting the Nile Valley. Here the surface is still varied by a few limestone hills, interspersed with ranges of dunes and stunted scrub. But when the traveller reaches the region of quartzose sandstones all vestiges of vegetation disappear. Nothing now meets the eye except sand and stratified rocks, alternating with deposits of a very rich iron ore. The land rises gradually in the direction of the west, and towards the parting-line between the limestones and sandstones the plateau attains an elevation of 1,460 feet. Here begins the ocean of sand, which stretches for unknown distances in the direction of Fezzan. In the north it extends for no less than 240 miles towards the Siwah oasis.

The vast dunes of this region, produced by the weathering of the sandstone rocks, have a mean altitude of over 300 feet, hence exceed in elevation the largest sand-hills of Europe. Some are even said to attain a height of 500 feet. Disposed in the direction from south to north, or from south-south-east to north-north-west, perpendicularly to the polar winds, the ranges follow each other like the ocean waves under the regular action of the trade-winds. Secondary systems of dunes, which may be compared with the false cones occurring on the flanks of Etna, are developed by the irregular atmospheric currents, and these are usually disposed

transversely or obliquely to the normal ranges. The bottom of the trough between two parallel ridges presents a tolerably good footing to the wayfarer; but progress is extremely difficult on the slopes of the crumbling sandhills. No springs rise at the foot of the dunes; no living thing dwells in this region of death, where travellers themselves plodding wearily and silently through the sands seem like phantoms to each other.

CLIMATE OF EGYPT.

The climate of Egypt, although very different in the neighbourhood of the Mediterranean and in the narrow valley of the Upper Nile skirted on both sides by the escarpments of the desert plateaux, is remarkable especially for the uniformity of its phenomena, the regular course of the atmospheric currents, and the dryness of its atmosphere. In its meteorological conditions, the valley of the Nile, that is to say, Egypt, resembles the Red Sea. As in all mountain gorges, the aerial currents which penetrate into this marine basin follow it regularly in the direction of its length. Here they become changed either into the *shemal*, or wind of the Gulf of Suez, or else into the *assiab*, or wind of the Gulf of Aden. Thus the north-east monsoon, which in the Indian Ocean prevails from October to March, changes its direction on entering the Gulf of Aden, where it becomes a south-east wind. So also the khamsin, which comes from the Libyan desert—that is, from the west—on reaching the Red Sea is deflected northwards parallel with both coasts. In the same way the western, northern, and north-eastern currents from the Mediterranean, all alike take a direction contrary to that of the south-east monsoon. On the other hand, the land and sea breezes, which alternate with such remarkable regularity on most of the tropical coast lands, play a very feeble part along the shores of the Red Sea. Utilised to a limited extent by sailing vessels for a few hours of the day, they are borne now to the north, now to the south in the general current of the atmosphere. They acquire a little influence only at the change of seasons in spring and autumn.

Under the action of the alternating northern and southern breezes, a corresponding movement takes place in the Suez Canal, where in summer the Mediterranean waters are driven towards the Red Sea, in winter, those of the Gulf of Suez towards the Bay of Pelusium. About 14,000,000,000 cubic feet of water thus ebb and flow from season to season, at a velocity varying from 6 to 26 inches per second. In the Nile Valley, as in the long trough of the Red Sea, all the winds, whatever their original direction, change in the same way to currents setting north and south. In Lower Egypt alone, where no obstacle intervenes to obstruct their course, they blow from all quarters of the compass, according to their original direction and modifying local influences.

The alternation of the aerial currents is regulated in the Nile Valley with less uniformity than in the Red Sea. In this longitudinal basin they succeed each other in almost rhythmical order. In winter the south-east monsoon, which rushes impetuously into the Strait of Bab-el-Mandeb, acquires the ascendancy, and makes itself felt at times as far as the neighbourhood of Suez. In summer, on the

contrary, the north-west winds prevail almost as far south as the entrance of the Gulf of Aden. In order to avoid this opposing current, mariners from India or from the Hadramaut coast found it convenient to land their cargoes at some port more easily accessible than the Gulf of Suez. To this cause was due the great importance acquired by the ports of Bérénice and Myos Hormos, inducing the Ptolemies and the Cæsars to open up highways, provided with watering stations, across the desert between the Nile and the Red Sea.

In Egypt also the northern currents prevail normally during the hot season, thus tending to temper the excessive summer heats. Their prevalence is due to the higher temperature of the surrounding sandy deserts, and to the same cause must be attributed the predominance of the same winds even in winter. From the end of March to the beginning of May alone, a struggle takes place between the opposing currents. During this season Egypt is frequently exposed to the influence of the so-called "fifty days' wind," although it seldom prevails for such a length of time; nor is it ever felt during the night. Everything becomes parched by the hot breath of the khamsin, which is charged with particles of dust, according to Pictet, in the proportion of one gramme to 35 cubic feet of air. At times this pestilential wind deserves the name of simun, or "poison," and numerous instances are recorded of caravans and travellers who, even in Lower Egypt, have lost their pack-animals, killed by the deadly blast of the khamsin.

A graphic description is given by Mrs. Speedy of one of these frightful sandstorms, by which her party were nearly overwhelmed in the Arabian desert. "On the horizon coming up behind us was a dense wall of impenetrable dust and sand. It had been scarcely visible in the morning, and even at the time I am now speaking of it was only rising into view. But the keen Arabs, children of the desert, had descried the long dark line as it lay almost immovable in the early morning, and scented the possible danger. Should the wind rise it would be brought up rapidly, and might sweep over us before we could reach Tokar.

"We were soon going like the wind. We on our camels, and the Arab on foot, fled before that sandstorm at the rate of between seven and eight miles an hour for over three hours, doing nearly four-and-twenty miles in that time. We had not gone half-way when I insisted on stopping, fearing that the man would be utterly exhausted; and it was during that rest that I discovered the real state of the case.

"We dismounted and sat down among the undulating ridges of sand on the vast plain, when I turned my head and clearly perceived what we were flying from. The whole truth broke upon me, and for the moment I felt almost paralysed. The wind was rising, coming up as the day advanced, and we were yet a long way from Tokar. There was but one thing to be done. Up again and press on as before. I think we scarcely spoke again before we reached Tokar; the one absorbing thought was to get forward.

"Shortly before we arrived at the town, however, the Arab slackened his pace and turned round. He made us turn too, and pointed out that the wind had unexpectedly changed, and swept the storm, which had at first set out in our direction, another way. The great thick wall, which might have imprisoned us

had turned southwards, and was now travelling over the desert away from us, I earnestly hoped, to expend itself in space before meeting with any unfortunate victims. Inexpressibly thankful was I as we entered the town, for I could not but feel that it had perhaps been a race for life. It was now over and we were safe; but it was several hours, or I may more truly say days, before the effect on my overstrung nerves passed entirely away." *

On an average, northern breezes are six times more frequent at Cairo than those from the south. But as we ascend the Nile and approach the equatorial regions the equilibrium tends to be established between the conflicting currents, and in Nubia the northern or winter are about fairly balanced with the southern or summer winds.

RAINFALL.

The region of the Egyptian delta is comprised within the Mediterranean climatic zone. Winter and summer here succeed each other as in Southern Europe, the only difference being that the intermediate seasons of spring and autumn are reduced to much narrower limits.† The Egyptian summer, during which the Nile waters rise and spread over the land, is accompanied by the clearest skies; yet the atmosphere is then heavily charged with moisture, often almost to the point of saturation. On the Red Sea coast especially, the traveller finds himself at times enveloped as in a vapour bath.

Winter is the rainy season, but it is seldom attended by much humidity, although in the lower delta the rainfall often suffices to interrupt the communications. The banks of the canals, here the only highways, are changed by the slightest showers into quagmires of treacherous and slippery mud. Even in Alexandria, lying as it does within the influence of the moisture-bearing clouds from the Mediterranean, the mean annual rainfall is only 7 inches according to Russegger, or 8 inches according to more recent observers; that is to say, one-third of the quantity received by Paris, and one-fifth of the average for the whole of France.‡ At Cairo, where the marine vapours arrive already deprived of much of their humidity, the mean discharge is much less, amounting to no more than about 1½ inch, or the fiftieth part of the discharge at Cherra-Ponji in British India.

The ancient Egyptians called themselves the inhabitants of the "Pure Region." Nevertheless the sky is overcast at Cairo for over three months in the year, and at times the downpours have been heavy enough to flood the streets. In 1824, and again in 1845, several houses were destroyed by these sudden freshets. In the Arabian and Libyan deserts south of the delta, the rains are still lighter, although not altogether unknown, as is so often asserted. Tremendous discharges

* "Wanderings in the Sudan," vol. ii., p. 250.

† Mean temperature of Egypt	Alexandria, 68° F.	Cairo, 70° F.	Port Said, 71° F.
" " in August (hottest month)	" 70° F.	" 85° F.	
" " in January (coldest month)	" 54° F.	" 50° F.	
Highest recorded	" 111° F.	" 116° F.	

‡ Mean annual rainfall at Alexandria from 1873 to 1881, 8·5 inches.

were experienced both by Cailliaud in the Siwah oasis, and by Rohlfs in that of Dakhel farther west. In the Arabian desert the sudden rains on one occasion swept away the village of Desam, near Atfieh which was afterwards rebuilt on a site farther removed from the bed of the wady.

On the other hand, there has been at times a total absence of rain. Not a drop fell for the space of six years in the district between Kosseir and Keneh; all vestiges of herbage disappeared from the valleys, and of trees the acacia alone resisted the effects of this protracted drought. Nevertheless the cisterns, which were fed by rain water along the old highway between Coptos and Berenice, are sufficient proof that this district does not lie within the absolutely rainless zone. In certain places natural cisterns or basins are met, formed by the subsidence of the nummulitic rocks, and here the water is collected on an impermeable bed of siliceous formations. These so-called *mggheta*, which differ greatly from the surface springs, usually known by the name of *el-âin*, nearly always contain excellent water, the existence of which the surrounding tribes endeavour carefully to conceal from Europeans.

But however slight is the winter rainfall, it nevertheless suffices, even without the aid of irrigation, to impart to the vegetation an appearance of freshness and vitality, which again disappears during the summer months. In this respect the Egyptian winter season presents the most striking contrast to that of temperate Europe. In the delta, however, the rainfall represents a part only of the actual discharge. Here the night dews are tolerably abundant, especially during the prevalence of the marine breezes, when they are heavy enough to regularly moisten the roofs and balconies of the houses in Alexandria. But the amount of dew diminishes in direct proportion to the distance from the Mediterranean, and in the Nubian desert, there is a slight discharge only in the vicinity of the river. In the heart of the Egyptian solitudes, where the bare rocks and white sands cause the heat of the sun to radiate into space during the night, it often happens that the dew freezes towards the morning. At its rise the sun, which will in a short time raise the temperature of the ground to over 100° F., begins by melting the slight layer of hoar-frost covering the desert. Even on the arable lands the plants are occasionally frozen, and Mr. Maspero picked up an icicle on the route between Edfu and Esneh. The extremes of heat and cold, although less considerable than in Nubia, are nevertheless very great in Upper Egypt. They increase gradually, proceeding from the north southwards, ranging in this direction between the isothermal lines of 20° and 25°.

CLIMATIC CHANGES DURING THE HISTORIC PERIOD.

Egypt is one of those regions whose climate must have undergone the greatest changes within the historic period. To judge from the bas-reliefs decorating the walls of the Saqqarah necropolis, probably the oldest in the world, the habits of the people at that time were not those of a nation everywhere hemmed in by the wilderness. They had no knowledge of the camel, a domestic animal without

which the Arab of our days could not venture to penetrate into the burning wastes. Before the arrival of the Hyksos they were even unacquainted with the horse or the sheep, and possessed the laborious ox alone.

The Egyptians of that remote epoch had not yet become the herd of serfs, such

Fig. 99.—ISOTHERMAL LINES AND RAINFALL OF EGYPT.

Scale 1 : 11,900,000.



as they are depicted on the bas-reliefs and wall-paintings of subsequent times. They were still a light-hearted peasantry, lovers of feasts and the dance, ignorant of the hateful arts of war. All this would seem to justify the hypothesis that they

lived in a climate different from that of our days. Oscar Fraas goes even so far as to assert positively that "the desert was not yet."* Such an assertion is doubtless exaggerated; but it is at the same time certain that water was formerly far more abundant in the now arid valleys of the Libyan and eastern uplands. In many places the traces may still be observed of ancient cascades, which flowed perennially in these now all but waterless regions. At that epoch the woodlands still yielded sufficient timber to work the mines, which now lie idle for lack of fuel. To bake their bread, the fellahin use nothing but cakes of dung mixed with mud and dried in the sun.

But while the supposition of a considerable change in the Egyptian climate since the dawn of history may be accepted as highly probable, the statements of several travellers and meteorologists regarding certain climatic modifications, supposed to have occurred since the beginning of the last century, cannot be admitted as yet demonstrated. It is often asserted that the plantations of mulberries and other trees made by Mohammed Ali have directly tended to bring about an increase of moisture, and the great progress in agriculture made during the present generation is supposed to have had a like result. But these statements rest entirely on personal impressions, which have not yet been confirmed by systematic observations.

It may also be questioned whether the local climate of the Isthmus of Suez has really undergone any slight modification at all since the construction of the fresh-water and marine canals. These works, however gigantic in the eyes of man, still remain too insignificant, compared with the extent of the surrounding seas, to have produced any appreciable change, except perhaps in the immediate vicinity of the canal. They can scarcely have had any general influence in moderating the extremes of heat and cold, rendering the atmosphere more humid, or increasing the abundance and duration of the rainfall.

FLORA OF EGYPT.

Few regions of the globe beyond the polar zones possess a flora so poor in vegetable species as that of Egypt. The uniformity of its plains, the lack of variety in the chemical composition of its soil, the absence of well-watered hills and uplands, the monotonous character of the agriculture, everything tends to produce this result. Thousands of years ago the peasantry had already destroyed the forests, unless the tracts be regarded as such which are still partly covered with the *sunt* (*acacia Nilotica*), the formerly sacred tree used by the Israelites to build the Ark of the Covenant. So valuable is timber in Egypt that the boatmen use cow-dung kneaded with clay and chopped straw instead of planks to deck their barges.

Taken as a whole, the Egyptian flora presents a mixture of European, Asiatic, and African species. But the last mentioned are the most prevalent, at least beyond the region of the delta. The characteristic aspect of the Egyptian land-

* "Aus dem Orient."

scapes is due especially to the prevailing African vegetation, here represented by the tarfa (*tamaris Nilotica*), the date, and sycamore. The dâm-palm, which, however, nowhere grows spontaneously in Egypt, is met in the gardens only above Esneh. Formerly the Fayum bore the name of "Sycamore Land;" and one of the ancient appellations of Egypt itself was "Land of the Bek Tree," probably a species of palm.

All the villages have still their avenues of palms encircling the walls, or fringing the banks of the canals, and everywhere the people gather in the evening beneath the shade of the broad-branching sycamore. The sycamore, a very different species from the plant known by that name in Europe, was formerly far more common in Egypt than at present. Its wood, supposed to be "incorruptible," was employed in the manufacture of costly furniture, and especially of the coffins placed in the sepulchral chambers. After a lapse of three thousand years, the boards recovered from these tombs still retain their firmness and delicacy of texture, thanks to the excessive dryness of the atmosphere. The fruit of the sycamore was regarded by the ancients as one of the choicest, whence the saying that "the man who had once tasted it could not fail to return to Egypt." On this account it was customary on setting out for foreign lands to eat of these figs, in order thereby to secure the traveller's return to the Nilotic plains. Now, however, the fruit of the Egyptian sycamore is regarded as fit food only for the ass. Has its flavour deteriorated, or has the taste of the Egyptians themselves undergone a change since those times?

But if some species would seem to have been modified, others are known to have entirely disappeared. The dug-out tree stems in which the dead were laid during the eleventh dynasty belong to varieties which are now met only in Sudan. The fruit of the dâm-palm, which is no longer found north of Upper Egypt, and that of the argun, now confined to Nubia, occur in great abundance in the old Egyptian burial-places. And what has become of the papyrus, whose name is associated more intimately than any other with Egyptian civilisation itself? Salt, Drovetti, Reynier, Minutoli, have discovered it in the neighbourhood of Damietta; but it is no longer found in any other part of Egypt. Thus it has all but disappeared from its original home, while still flourishing in Syria and in Sicily, whither it was introduced from the Nile Valley.

Where also are the masses of pink lotus, with its broad-spreading leaves, beneath which the people of Alexandria, in the time of Strabo, floated on the still waters, enjoying the cool zephyrs and perfume of the flowers? The white lotus, formerly diffused throughout the whole land, is no longer met beyond the limits of the delta. Reeds and the pink epilobium are now the plants most frequently occurring on the shores of the lakes and meres in Lower Egypt.

FLORA OF THE OASES.

The flora of the oases, separated from that of the Nile Valley for an unknown cycle of ages, presents some remarkable features. Thus while the Egyptian

plants are mainly of African origin, those of the oases, whether cultivated or growing in the wild state, are mostly of European descent. Hence the inference that these depressions were in direct contact with the west Mediterranean lands at an epoch antecedent to their relations with Egypt properly so called.

The greater the extent of the oases, the greater is naturally found to be the variety of their flora. In that of Farafreh Ascherson collected ninety-one species, more than double that number in Dakhel, and as many as two hundred in Khargeh. But the widely diffused *plantago major*, found both in Farafreh and Khargeh, is unaccountably absent from the intervening oasis of Dakhel. In the Arabian desert the characteristic plant on the slopes and uplands is the *ratama*, a species of broom resembling that of the Canary Islands. The mugwort flourishes in all the depressions and along the banks of the wadies; in other respects the flora of this steppe region is allied to that of Palestine.

FAUNA.

Like its flora, the Egyptian fauna is more African than European. If some domestic animals have been associated with the ass, which is seen figured on the ancient monuments of Egypt, the camel, the sheep and the horse, the latter a "Turanian" variety introduced by the Hyksos, have reached the Nile Valley from Asia. Most of the wild beasts have disappeared from the region of the Lower Nile, where they have retreated before the advance of human culture. The monkeys, which are represented on the old bas-reliefs as associating familiarly with man himself, are no longer found in Egypt. The lion and the leopard have also moved southwards, while the hippopotamus and even the crocodile have retired to the Nubian reaches of the Nile. None are now found farther north than Ombos.

Hyænas are still common on the skirts of the desert; but of other wild animals scarcely any have survived except the smaller species, such as the caracal, the jackal, fox, "cat of the steppe," supposed to be the ancestor of our domestic cat, the ferret, and the ichneumon, or "Pharaoh's rat." The fox-dog figured on the bas-reliefs of the temples, and on the paintings of the sepulchral chambers, lives freely in Egypt, venturing even as far as the skirts of the desert. The species of greyhounds sculptured on the old monuments have also survived to the present time. On the other hand the wild boar, although not represented on the ancient bas-reliefs, now infests the reed thickets in the Lower Nile region.

In the solitudes bordering on the arable land, antelopes descended from varieties which the Egyptians had formerly tamed, are still numerous. They are here represented by several species, nearly all of which have adapted themselves to their surroundings, assuming almost the identical colour of the ground now inhabited by them. The mice and all other rodents, as well as the reptiles and insects, have also a grey or yellowish tint, causing them to be easily confused with the sands and rocks of the wilderness.

The Egyptian avifauna is very interesting, owing to its European species, such as the stork and quail. These birds of passage cross the Mediterranean twice every

year, flying in spring north to Europe to enjoy the freshness of the temperate climates, returning in autumn to reoccupy their nests, which stretch along the banks of the Nile as far south as the foot of the Abyssinian highlands. Of stationary birds in Egypt there are numerous species, several of which are distinguished for their rare beauty. The white eagle soars into the higher aerial regions; while the nectarine with its metallic sheen, lovely as the humming-bird of the New World, flits and darts amid the garden flowers.

The *charadrius Ægyptiacus*, supposed by the ancients to be the faithful companion of the crocodile, still enlivens the banks of the Egyptian Nile, from which the great saurian has long retreated to the Nubian waters. With him also the ibis has departed for the southern solitudes; but pigeons still flutter in dense clouds above the cultivated plains. In fact this bird forms everywhere a characteristic feature of the landscape in the inhabited parts of the country. "Every village has its pigeon-houses, looking like great mud cones, and in the evening the owners go out and call them in. An amusing instance of the usual Egyptian dishonesty was told me the other day. When a man wants to get hold of extra pigeons, he goes out of an evening; but instead of calling them he frightens the pigeons away. They do not understand this; keep circling above, and swoop down now and then towards their houses. Other pigeons, seeing this commotion, join them, and as soon as the man sees there are enough, he hides. The whole of the birds, old and new, then go into the house, and the man returning, shuts them in. This would be a fine business if it were not that all of them do the same thing, and therefore each gets caught in his turn. They know this perfectly well, but no Egyptian fellah could resist the temptation of cheating his neighbour."*

The waters of the lakes and lagoons, throughout the delta region, are also frequented by myriads of aquatic fowl. Amongst the commonest species here met are the flamingo, pelican, heron, crane, and duck. Some of these birds are captured by the hand. Concealing his head in an empty gourd, which seems to float casually on the surface, the fellah swims stealthily towards the bird keeping guard, and seizing it suddenly by the feet from below, draws it under before it has time to give the alarm. Then the flock being more easily surprised, may be taken in large numbers.

Like the aquatic birds on the sedgy banks, fish teem in multitudes in the waters of Menzaleh and the other lakes of the lower delta. The annual opening of the fishing season is celebrated by a feast, which coincides with the arrival of the mullets from the Mediterranean in the Gemileh lagoon. All the channels leading into the interior of the basin are closed by a long line of nets; then at a given moment the fishermen get their boats ready, armed with hooks and barpoons, while on the neighbouring beach the feast is prepared by the women. Presently the sea begins to glitter; the shoal of fish, pursued by the porpoises and other voracious animals, crowd about the entrance, causing the water to sparkle with a thousand prismatic tints. A suppressed murmur, as of many voices, caused by the rush of the living masses and splash of the troubled waters, gradually increases, and

* E. Sartorius, "Three Months in the Sudan," p. 32.

becomes mingled with the shouts of the men, and the shrieks of women and children. Now the terrified shoals get pent up in the narrow passage and entangled in the nets. Here they are easily captured in myriads, and in a few hours all the fishing-smacks are filled to the gunwales. But after this first take the fish are allowed for the rest of the season to enter freely into the lagoon, where they are hunted in the open waters.

In the Nile itself the most common species is the so-called *shabal*, a fish armed on the back with three sharp and barbed spines, which inflict painful wounds on those who touch it. The shabal is amongst the very few species that utter a faint cry when taken from the water. The sound resembles somewhat the chirp of the cicada, although not quite so loud.

A large number of the Nile and Red Sea species have been represented on the ancient monuments with such truth to nature that Russegger has succeeded in identifying all of them.* The opening of the Suez Canal has been followed by a partial intermingling of the Mediterranean and Red Sea fauna, which had hitherto remained quite distinct. Fishes, molluscs, and other marine forms have passed from one basin to the other, while shoals of various species have met midway in the Bitter Lakes. The free navigation from sea to sea is obstructed by several causes, such as the exclusively sandy nature of the canal bed and embankments, the currents setting in and out, the excessive salinity of the water, the incessant passage especially of steamers. The carnivorous species do not penetrate to any great distance into the canal, owing to the absence or rarity of the fish they prey upon. Nor has the Mediterranean yet been reached by the various corals which are so richly represented in the Red Sea.

One of the Egyptian insects, the *ateuchus sacer*, or sacred beetle, has acquired in the history of myths the symbolic sense of creation and renewed life. An image of the sun and of all the heavenly orbs in virtue of her globular form, she also creates a little world or microcosm of her own with the clay in which she deposits her eggs, and which she rolls with untiring efforts from the river-bank to the edge of the desert, where she buries it in the sands. She dies immediately her work is accomplished; but as soon as hatched, the young scarabæi resume their creative functions. This particular variety appears to have migrated southwards, like so many other animal and vegetable species in Egypt. While still very common in Nubia, it is now seldom met below Assuan, although a certain number were lately seen by M. Maspero at Saqqarah. The cause of its almost total disappearance from Upper Egypt is perhaps to be attributed to the greater breadth of the cultivated zone which in many places now intervenes between the banks of the Nile and the skirt of the desert. In Nubia the distance the beetles have to traverse with their precious burdens is usually much less. The Coptic mothers often suspend round their sick child's neck a living scarabæus wrapped in a rag or enclosed in a nut-shell.

* "Reisen in Europa, Asien, und Afrika."

INHABITANTS OF EGYPT.

The present Egyptian descendants of the ancient Retu still greatly resemble their forefathers, although during the last four thousand years many foreign elements have tended to modify the original type, at least in the delta and Middle Egypt. The Copts especially may be regarded as of comparatively pure stock, and are in fact still often known as the "People of Farûn," that is, of "Pharaoh." Under the dynasty of the Ptolemies, and later during the Roman period, they must have doubtless become diversely intermingled with the neighbouring races on the Mediterranean seaboard. But since their conquest, over twelve centuries ago, by the Mohammedans, religious hatred has erected a barrier between these Christians and the invaders, so that amongst them the national type has been better preserved than amongst the other Egyptian communities.

THE COPTS.

The Copts are much more numerous than has till recently been supposed. According to the patriarch of Alexandria questioned on this subject by Vansleb in 1671, they appear at that time to have numbered not more than 10,000, or at the most 15,000 souls. But they were a few years ago estimated at 150,000, while the census of 1882 returned them at no less than 400,000, or about one-fifteenth of the entire population. More than any other section of the community, these Copts have the right to the title of Egyptians. The very name of Copt, or Kubt, appears to be a mere corruption of the ancient name of Memphis, Hâ-ka-Ptah, or "Abode of Ptah," corrupted by the Greeks to Aiguptos, a term applied indifferently to the river and the country. However, this appellation of Copt has also been referred to the name of Guft, or Coptos, a town where they are still very numerous. The destruction of this Christian city by Diocletian is the starting-point of the Coptic era.

The Copts are concentrated chiefly in Upper Egypt, in the districts of Assiut, and in the Fayum, where they possess whole villages all to themselves. In certain places they have taken for their habitations the so-called *der* or *deïr*, partly fortified monasteries, whose former inmates were devoted to celibacy. In these remote regions, far removed from the capital and situated at some distance from the main routes of trade and conquest, they have succeeded in preserving their customs and the monophysite form of Christianity which, like the Abyssinians, they had received from the early Byzantine Church. In the Nile Valley, north of Assiut, they are found only in the towns as artisans, money-changers, and employés. Since the spread of religious tolerance they have taken advantage of the right to establish themselves in all parts of Egypt. But none of them have ever occupied high political functions, like the Turks, Armenians, and even the Jews. Before they had acquired equal civil rights with the Mussulmans, constant inroads were made on their numbers by Islam, especially through mixed marriages. Most of the Copts being circumcised, in accordance with the old Egyptian custom long antecedent to the time of Mohammed, their entrance into the mosque suffices to

make them be regarded as Mussulman converts. Formerly the men were distinguished by the colour of their turban, the women by that of their veil, from the Mohammedan fellahin; and even then the Copts would often affect the white turban and general costume of their neighbours, in order to command greater personal consideration.

At present there are one hundred and twenty Coptic churches in the various provinces; but in many districts where the Copts are no longer found, the ruins of religious edifices attest the survival of Christianity down to comparatively recent times. The Christian communities are now once more normally increasing by the natural excess of births over deaths; for the Copts, who usually marry later than the other Egyptians, pay more regard to the family ties, and bestow greater care on their children.

But if the religion of Mohammed has failed to triumph over that of the cross, the language of the Arab Mussulmans now everywhere prevails in Egypt. The old Coptic tongue, which has afforded the key to the interpretation of the hieroglyphics, thus restoring the speech of the Pharaohs, from which it differs little, is no longer anywhere current. Most of the Copts learn the ancient language only for the purpose of reciting the prayers of a liturgy the sense of which they do not always understand. Some of their religious books are even now written in Arabic. The Coptic writing system is merely a modified form of the Greek alphabet, to which have been added a few letters borrowed from the cursive or demotic forms of the national hieroglyphic writing. The oldest document in the Coptic language dates from the middle of the third century of the vulgar era; in the tenth century it was still currently spoken by all Egyptians except their rulers. But since the seventeenth century Arabic has become the general language throughout Egypt, although a great number of old Egyptian terms still survive in the local dialects. Ancient rites, undoubtedly long anterior to the introduction of the foreign religions, have also been maintained among the Copts. Thus their tombs are still built in the form of houses, and each family continues to assemble once a year in the mausoleum for a funeral banquet. One of the names frequently given at baptism is Menas, which recalls that of Mena or Menes, true or pretended founder of the first Egyptian dynasty.

Those of the Copts who have received some education usually display a remarkable talent for keeping accounts and managing money matters. They are the worthy descendants of those ancient Retu whose day-books, and ledgers, and treatises on arithmetic, with sums in fractions, rules of partnership in business, equations of the first degree, have recently been brought to light.* Under the government of the Mameluks the administration of the finances was entirely in the hands of the Copts, who by means of a specially devised system of book-keeping had rendered the public accounts so incomprehensible to all others, that they had secured an absolute monopoly of this department. But the introduction of European financial methods, and especially the continually increasing immigration of the Syrian Catholics, no less skilful intriguers and even more instructed, with a wider

* The "Rhind Papyrus" in the British Museum.

knowledge of Arabic literature, gradually deprived the native Christians of the chief administrative functions. The inferior positions of scribes and notaries are,

Fig. 100.—EGYPTIAN TYPE: BAS-RELIEF ORNAMENTS THE TOMB OF SHEIKH ABD-EL-GURNAH, AT THEBES.



however, still left in the hands of the Copts, and the Egyptian bureaucracy comprises altogether more Christians than Mohammedans.

The Coptic clerk, we are told by Mr. Stanley Lane-Poole, is even "practically the judge of first instance, for it depends upon his favour whether the peasant's

suit ever reaches the governor's or judge's ears at all, and this favour is only to be obtained by hard cash, so that unless the peasant has enough money about him to bribe the Coptic intermediary he never wins audience of the judge himself at all. The only plan is to 'square' the scribe, and thus you obtain, not necessarily justice, but your suit. These Coptic scribes are found in every town, and at some places, such as Girgey, a large proportion of the population is Coptic. The black turban and kaftan would always distinguish them, but a glance at their face is generally enough. It is difficult to say exactly in what they differ in appearance from Mohammedans, but one is seldom wrong in identifying them. They constitute the lower official class, and are decidedly more corrupt and voracious than the Turkish governors themselves. There is an exceedingly good understanding established between the two orders of thieves, so far resembling that which exists between a local justice of the peace and the clerk of the justices, that it is really the clerk who knows and administers the law, while the great man takes the credit of it. Probably any other official class would prove as venal as the Coptic scribes—indeed the experiment has been tried with native Muslims without improving matters—but there can be no doubt that so long as our friend Girges or Hanna holds the clerkly inkstand and portfolio there will be no justice in the land.”*

THE FELLAHÎN.

The fellahîn, or peasantry, belong, like the Copts, to the indigenous race, more or less modified by crossings. Those living away from the great cities of Cairo and Alexandria call themselves Aulad-Masr, that is to say, “Children of Masr,” or “Egyptians.” Like their ancestors, both Copts and fellahîn are in general of mean height, 5 feet 5 inches to 5 feet 7 inches, with pliant body, straight and strong limbs. The head is of a fine oval shape, the forehead broad, the nose regular and rounded at the tip, the nostrils dilated, the lips full but finely designed, the eyes large, black, and soft, with the lids slightly raised outwardly. Most of the children are of sickly constitution and sullen temperament, with dull eyes, wan complexion, and full paunch. But such as escape the ravages of endemics grow up handsome and robust figures. The stranger wonders how such fine young men and women could have developed in the wretched hovels of these villages. Men are frequently met of really grand forms, recalling the characteristics of the sphinx, and most of the young women are endowed with an agreeable figure, a graceful and haughty carriage. There is no more pleasant sight than that of a young mother carrying her naked babe astride across one shoulder, as is their habit.

In the rural districts the women do not veil themselves so closely as in the towns. Nearly all paint the lips a deep blue, and tattoo a floral device on the chin. Some even decorate the brow and other parts of the body in the same way. All but the abjectly poor also wear diadems and necklaces of true or false pearls, coins, or gilt discs, the whole family fortune being thus at times lavished on them. The fellah has, so to say, no other want except this superfluous wealth, which he

* “Social Life in Egypt,” pp. 62-3.

bestows on his partner in life. His dwelling is a mere mud hut, a heap of clods dug out of the neighbouring ditch. His only dress is a pair of drawers, a blue cotton shirt, and the tarbush or felt cap. A few cakes of durrah, to which the wealthy classes add beans, lentils, onions, and dates, suffice to nourish him. Peace

Fig. 101.—VILLAGE HUTS.



he loves above all things, and in no other country where the conscription has been introduced are cases of voluntary mutilation of such frequent occurrence, the peasantry making themselves cripples, maimed of one hand, or blind of an eye, in order to escape military service.

The Egyptian is generally of a simple, kindly disposition, cheerful, obliging,

and as hospitable as his misery will permit him. Even if he has recourse to fraud or falsehood, the usual weapons of the weak against their oppressors, he seldom succeeds. His little tricks and subterfuges are easily seen through, and frequently serve only to redouble the brutal treatment of his masters. The Copt is as a rule more adroit in this respect than the Mussulman fellahin; for he has not only had to endure all kinds of hardships, like his Mohammedan neighbours, but has had over and above to cringe and play the hypocrite in order to escape from religious persecution. To avoid wholesale plunder he has had to conceal the few effects laboriously scraped together, carefully economising the fruits of a life condemned to ceaseless toil, stratagem, and beggary.

THE ARABS OF EGYPT.

The Semitic element has been largely represented amongst the Egyptian populations, even from times long anterior to the Arab conquest. Thus, according to Mariette, the indigenous communities settled on the southern shore of Lake Menzaleh are possibly the direct descendants, with but little intermixture, of the Hyksos, those "people of low race," who overran Egypt over forty centuries ago. Their type is said exactly to resemble that of the royal statues and sphinxes' heads discovered at San, the ancient Tanis, amid the alluvia of the lake. These supposed Asiatics inhabit the townships of Menzaleh, Matarieh, Salkieh, and the neighbouring villages. They are described as of tall stature and strong muscular development, with very broad features in comparison with the round cranium, large nose, prominent cheek-bones, very open facial angle, high forehead, intelligent glance and smile. According to Bayard Taylor, the descendants of the Hyksos would appear to be also very numerous in the Fayum depression.

But to the Arab and Syrian Mussulmans who arrived under the leadership of Amru, the population of Egypt is indebted for the largest proportion of its Semitic blood. Doubtless these Arabs have nowhere preserved themselves in a perfectly pure state amid the Egyptian communities; but they and their successors were numerous enough profoundly to modify the aboriginal element, especially in the towns, where all the Muslims who are neither Turks nor Circassians are uniformly spoken of under the general appellation of Arabs.

On the Red Sea coast the Abs, the Awasim, the Irenat, and other more recent immigrant tribes from Arabia, live on fishing and the coasting trade. In the rural districts on the verge of the desert, many Bedouin tribes collectively known as Ahl-el-Wabar, or "People of the Tents," have proudly preserved their lineage intact, tracing their genealogies back to the early conquerors. The Arab will no doubt at times take a wife from the family of a fellah, but will never condescend to give him a daughter in return. Leading a half-nomad life between the reclaimed lands and the wilderness, he despises the wretched peasant condemned to ceaseless labour in the furrow. Should he himself abandon his wandering habits, he would be at once looked upon by the nomad Bedouins as a mere fellah, like all the rest. But he usually dwells in the settled village communities only during a portion of the



CAIRO ARABS.

year, returning to the desert after harvest-tide. Thus their manner of life rather than their racial descent distinguishes the various sections of the population.

Nevertheless after settling down as sedentary colonists, the children of the desert continue to enjoy great privileges, and for generations are exempt from the *corvée* and conscription. At the same time the Bedouins of Egypt are by no means politically independent. Separated into two distinct groups by the Nile valley, those of the Arabian desert, no less than their kindred of the Libyan oases, occupy districts easily commanded on all sides. Hence they are completely dependent on their neighbours for their supplies of all kinds. They are moreover divided into some

Fig. 102.—A BEDOUIN.



fifty different tribes, several of which live in a constant state of hostility amongst themselves. No instance has yet been recorded of all the Bedouins of the desert making common cause in defence of their common freedom.

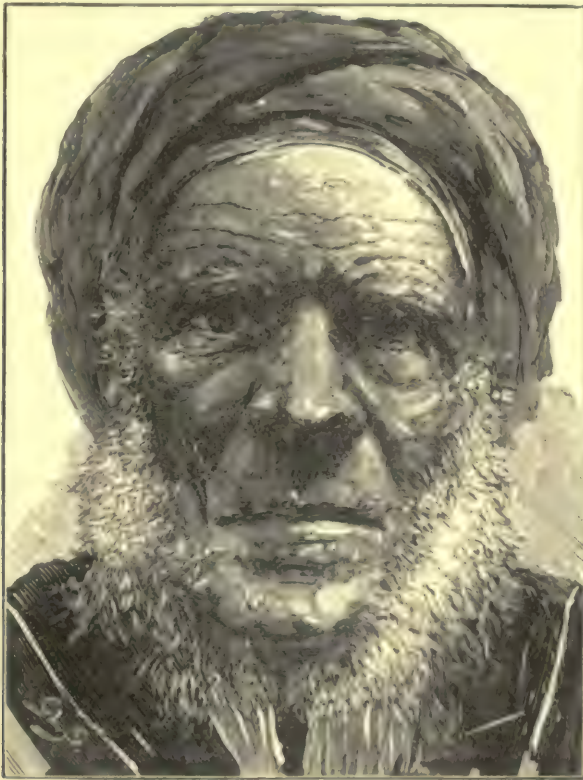
One of the most powerful tribes of the Arabian desert is that of the Maazeh, or "Goatherds," who, according to Maspero, are the ancient Maziu Libyans assimilated to the Arabs within a recent period. They are the hereditary foes of the Ababdeh, who are of Beja stock, and who dwell to the south of Kosseir, in the valleys of the Cataract range, and in Lower Nubia. The Ababdeh live mainly on milk and durrâh, the latter eaten either raw or roasted, or made into unleavened cakes. Their chief

the Ababdeh as camel-drivers in large caravans. But some still live close to the trade routes, and besides keeping stock, earn something from the services of various kinds which they render to passing caravans. They are also stationed here as road-watchers, receiving a little payment from their chiefs for this service.

THE ABABDEHS AND TURKS OF EGYPT.

The Ababdeh, who number about 30,000 altogether, are governed by an hereditary "chief," who nominally controls and deposes subordinate sheikhs for the different districts. Although nominally a vassal of the Khedive he pays no tribute, but on the contrary receives a sort of subsidy from a portion of the road dues

Fig. 104.—A VILLAGE SHEIKH.



levied on the caravans which pass through his territory. The chief and his representatives, jointly with the tribal elders, settle all internal disputes, so that the Egyptian Government has nothing to do with the clansmen, neither imposing taxes nor forcing them into the army. The chief is, however, personally responsible for the safe conduct of travellers along the caravan routes traversing his country. He furnishes camels and guides, and living himself in the Nile Valley, is held a hostage for the security of the desert roads. Mohammed Ali introduced this system of hostages among the Bedouins, and the result of this wise measure has

been profound "peace and absolute security in these inhospitable tracts. Before this time, these and all other Bedouins were much dreaded marauders. They made inroads from time to time into the cultivated territories, and the merchants and pilgrims, as late even as the time of Burckhardt's visit, never ventured to cross the wilderness except when armed and banded together in large caravans. All this has now been so much changed for the better that articles even lost on the road may now be recovered by giving due notice to the Ababdeh sheikhs." *

In the Libyan desert west of the Nile delta, the dominating tribe is that of the Aulad-Ali. The Hawarahs of Upper Egypt, who furnish to the Egyptian army nearly all its irregular cavalry, are of Tuareg (Berber) origin. According to the census of 1882, the number of all the nomad and semi-nomad Bedouins, hitherto estimated at from 70,000 to 100,000 at the utmost, was found to be about 246,000, with a considerable preponderance of the male sex. The men were said to outnumber the women by 11 per cent., a proportion nowhere else presented by any country where regular returns have been made, except in certain districts of the Japanese Archipelago.† But it may be presumed that in several instances inaccurate statements were made by the Arabs to the Government officials.

The Turks, although the official masters of the country since its conquest by Sultan Selim in 1517, are still looked upon as strangers. They have always held aloof from the mass of the people either in their military or bureaucratic capacity. They are far from numerous, numbering according to the various estimates from about 12,000 to 20,000. But the statement currently made that the offspring of these strangers are condemned by the climate to a premature end appears to be groundless. No doubt infantile mortality is excessive in families imperfectly acclimatised; but the issue of mixed marriages almost invariably follows the nationality of the mothers. It becomes Egyptian in the physical type as well as in speech, and the name of the foreigner merges in the local element. Accurate statistics have shown that the former Mameluks had very small families. But that all the Mameluks, whether Georgians, Circassians, or Albanians, did not become extinct is evident from the case of Mohammed Ali, the very man who pitilessly massacred these mercenaries. Although himself an Albanian from a Macedonian island he left a numerous progeny, founding in his own family the dynasty which is still supposed to rule in Egypt.

THE LEVANTINES, EUROPEANS, AND NUBIANS.

Even the Levantines, that is to say, the Syrian, Greek, Italian, or Spanish Christians long settled in the country, have certainly established themselves for several generations on the banks of the Nile, as have also their rivals in trade, the Yahud, or Jews. Although for many centuries marrying only within their own circles, they have in no respect lost their vital energies. The Europeans also settled

* Klunziger, "Upper Egypt," p. 255.

† Proportion of the sexes amongst the indigenous inhabitants of Egypt in 1882: men, 3,216,247; women, 3,252,869.

at Cairo and in the other large towns bring up their children successfully, provided they are careful to observe the ordinary laws of health. Infant mortality is even less amongst them than amongst the natives, whose poverty for the most part prevents them from bestowing the necessary care on their offspring.* Nevertheless the foreign colony, in which the men are far more numerous than the women, increases not by an excess of births over deaths, but only by immigration.

At present the European element is represented in Egypt, or at least in Alexandria and Cairo, by much more numerous communities than those of the Turks.† In 1882 it exceeded 90,000, and will probably acquire still further expansion now that the country has been placed under the protectorate of a Western power. Thanks to their greater intelligence, strength, and resources, the Europeans rather than the Turks are the true masters of the land.

To this immigration of conquerors from the north corresponds that of the Nubian Barâbra or Barbarins from the south. These Barâbra, engaged almost exclusively in menial occupations, are the "Auvergnats of Cairo."‡ The figures of Nubians carved on the ancient Egyptian monuments show that this immigration has been going on for ages. There remain to be mentioned the Ghagars, those Hindu tribes to whom the Spaniards and English have given the name of Gitanos and Gypsies, that is, "Egyptians," and who are still found in the Nile Valley. Amongst these wandering communities the men are chiefly horse-dealers, tinkers, mountebanks, and fortune-tellers. They also supply the tattooers and serpent-charmers, as well as the dancing dervishes, who are usually but wrongly supposed to be zealous disciples of the Prophet. Notwithstanding their Asiatic type and wild penetrating glance, by which the Gypsies are everywhere distinguished, they all claim to be pure Arabs, pretending to have migrated at first towards West Africa, whence they returned to Egypt many centuries ago. The most "noble" tribe of the Ghagars even takes the name of Barmecides, though more commonly known by the appellation of Ghawâzi, whence may possibly be derived the terms Gabachos and Gavaches, applied in Spain and in the south of France to the Gitanos and even to all despised immigrants. Amongst the Ghawâzi are chiefly recruited the dancing-girls, who are not to be confused with the more respectable class of the Almeh, or singing-women.

THE "PLAGUES OF EGYPT."

The numerous population of Egypt, which has increased threefold since the beginning of the century, and which is progressing at the mean yearly rate of about 50,000, is a sufficient proof of the salubrity of the climate.§ In Upper Egypt especially, where the atmosphere is not charged with moist exhalations, the climate is very healthy notwithstanding its high temperature. It is even

* Mortality of children under ten years in 1878: Europeans, 39·97 per cent.; natives, 55·55 per cent.

† Europeans in Egypt, according to the census of 1882: men, 49,054; women, 41,832.

‡ Edmund About, "Ahmed le Fellah."

§ Population of Egypt in 1800, under the French occupation: 603,700 houses, or 2,514,400 souls, reckoning 8 per house. Average mortality, 26 to 27 per 1,000.

better still in the desert, as was shown by the medical statistics taken while the heavy works were in progress for the construction of the Suez Canal. Egypt is even visited in winter by a number of European invalids, especially those suffering from affections of the chest. But the large cities of Cairo and Alexandria, where the streets are constantly swept by whirlwinds of dust, do not appear to be the best places of residence for persons subject to these complaints. Here in fact consumption commits great ravages amongst immigrants from the Upper Nile, and every year carries off numerous victims, even amongst the natives. In Cairo a seventh part of the mortality is due to pulmonary affections, and in the military hospitals as many as one-third of the deaths has sometimes been caused by tuberculosis. But the maladies Europeans have most to dread are dysentery and, in certain parts of the delta, marsh fevers. Hepatitis, a "specific poisoning of the liver," almost unknown amongst the Mohammedans, who abstain from alcoholic drinks, is very common among Europeans, owing to their less careful habits.

The chief disorders of the natives are such as may be attributed to their abject poverty. The plague, formerly so terrible, and which in 1834 and 1835 carried off 45,000 persons in Alexandria, and 75,000 in Cairo, has ceased its ravages in the Nile Valley. Even cholera, which in 1883 converted Damietta into a vast hospital, now confines its periodical visitations to a very restricted area. But on the other hand anemia, caused by insufficient nourishment, is everywhere endemic and fatal, especially to children. In no other country are blind and one-eyed persons so numerous as in Egypt. On landing at the quays of Alexandria the stranger is at once struck by the effects of contagious ophthalmia amongst the crowds clamouring around him, and this first impression is confirmed by his subsequent observations and supported by statistical returns.* Poverty of blood, the reflection of the light on the white walls and on the surface of the river, the sudden changes of temperature, and especially the saline and nitrous dust formed by the decomposition of the Nilotic mud and raised in whirlwinds by the breeze, are the chief causes to which must be attributed these dangerous ophthalmic affections. Nevertheless the Bedouins of the desert are nearly all endowed with excellent sight. The flies, the "plague of Egypt," certainly contribute much to foster and aggravate these disorders. "When one sees the normal fly-ridden countenances of the Egyptian children, it is impossible to be surprised at the enormous proportion of blind or one-eyed adults. Ophthalmia arises in various ways; but it is undoubtedly propagated by flies, and to the carelessness and prejudice of mothers and the uncleanness of infants must be ascribed a good deal of its prevalence. The women think it is unlucky to wash a baby's face, and prefer to let him go blind all his life to removing the pestilential flies that cover his eyes like a patch of court-plaster."† They lose even the strength to drive away the swarms of their tormentors, and patiently wait for sleep to relieve them from their sufferings.

Leprosy, although less common than in Syria, has unfortunately not dis-

* Proportion of persons suffering from ophthalmic disorders in Egypt, according to Amici: 17 per cent.

† "Social Life in Egypt," page 59.

appeared from Egypt. The species of gastric fever known in the East by the name of *deng* is also very prevalent, while the elephantiasis of the Arabs frequently attacks the natives, especially in the delta. Another skin disease, the so-called "button" of the Nile, analogous to the "date" of Bagdad and the "button" of Aleppo and Biskra, is endemic in the country. Most of the inhabitants as well as strangers suffer from this sore once during life or during their residence in Egypt, although for the most part under a somewhat mild form of the malady.

RELIGION.—THE MOHAMMEDANS.

Upwards of nine-tenths of the Egyptians are Mohammedans. But in a land where religions have succeeded each other like the alluvial deposits of the Nile, the people have not had time thoroughly to conform themselves to the official cult. Hence more than one observer has discovered in the legends and ceremonies of the fellahin traces of the religion which formerly attracted multitudes of worshippers to the vestibules of the great temples at Thebes and Memphis. Thus the nocturnal feast attended by the peasantry in the expectation of a visit from the golden cow in the ruined sanctuary of Denderah, recalls the solemn processions made in honour of the divine heifer Hathor.* In truth the Egyptians are Mussulmans only on the surface, and compared with the indifferent masses, very few are those who scrupulously observe the prescriptions of the Prophet. The mosques are little frequented; the fellah does not always perform his ablutions in the canal flowing by his dwelling, nor does the Bedouin stop in the wilderness to carry out the prescribed formality with sand in the absence of water.

During the last fifty years the spirit of religious tolerance has made rapid strides in Egypt. However intense the zeal of the most ardent hajis, none of them came forward to oppose the English until the "holy war" was proclaimed, and even then none of the few volunteers who entered the ranks were natives of Lower Egypt.† However proud of belonging to the chosen people, the Egyptian Muslims have forfeited the right any longer to despise aliens to their faith, with whom they have not dared to try issues, and who confront them with all the marks of intellectual superiority and all the resources of material strength. Nevertheless within the limits of Egyptian territory is found the very centre of the hostile movement against the Christians. The formidable Mussulman brotherhood of the Mahdi, or "Guide," Sidi Mahommed Ben Ali-es-Senûsi, has its metropolitan convent at Serhûb, or Jarahûb, in the oasis of Faredgha. But the Guide himself, allied apparently with the Mahdi who raised the Arab tribes of Kordofân and the Upper Nile, is a native of Algeria, and from Mauritania come nearly all the faithful that have rallied round him. The choice of this place was due to two distinct advantages which it presented—an almost central position for the propaganda in the Mussulman world, and its remoteness from all military and trading stations in the hands of Europeans. Here he has been able almost secretly to

* G. Maspero, "Manuscript Notes."

† Mackenzie Wallace, "Egypt and the Egyptian Question."

develop his projects during the past twenty years free from the danger of interference from foreign states.

In accepting their religion from the Arabs the Egyptians have also, notwithstanding their great numerical superiority, adopted the language of their con-

Fig. 105.—RELIGIONS OF EGYPT.

Scale 1 : 6,000,000.



• Towns where the Copts and other Christians are numerous.

✕ Coptic monasteries. The names of Senusi communities are underlined.

120 Miles.

querors. Arabic is spoken with purity in Egypt, and the University of El-Azhar at Cairo is even one of the places where are discussed and regulated the most delicate questions of Arabic grammar and literature. The only differences between the local idiom and that current in Hejaz are the use of a few Coptic and Turkish terms, and a peculiar manner of pronouncing certain letters of the

alphabet. But if they are now Arabs in religion and speech, the Egyptians have become Turks in their political organisation, administration, and absence of a hereditary aristocracy.

SOCIAL USAGES.

In their social institutions they have also to a large extent assimilated themselves to their Arab and Turkish rulers. More readily even than by the Turks polygamy has been adopted, especially amongst the governing classes; while monogamy is still universal among the peasantry. Divorce is more generally practised than in any other Mussulman country, and nearly half of the marriages are said to be followed sooner or later by repudiation. In certain Coptic circles it is customary to contract temporary alliances even for so short a period as a few weeks. Yet the priests bless these unions with the same solemnity as those of a permanent character. At the same time such temporary marriages may be made binding, should the contracting parties so desire. Cousins are frequently betrothed from the cradle, and marry on arriving at the age of puberty. Adultery is of rare occurrence in the Egyptian family.

A curious account is given by Mr. Lawrence Oliphant of a Coptic wedding witnessed by him. "The ecclesiastic who performed the ceremony occupied evidently a very subordinate position in the Church, and his principal object seemed to be to finish the operation as speedily as possible, and get paid for it. He seated himself on a low chair in front of the happy couple, pulled a Coptic prayer-book out of his breast, and gave the signal to his attendants to commence operations, on which a man squatting on his heels behind the chair clashed a huge pair of cymbals, and half-a-dozen others in a like attitude set up a lugubrious chant in a loud nasal voice. Whenever they paused the women ranged on the benches burst forth in a shrill scream, with a quaver or ululation resembling the note of the screech-owl. It had a wild barbaric effect, as from time to time it broke in upon the uncouth chanting and clanging cymbals of the choir. Then the priest took up his part and read the service at a racing speed. All this time the men were talking and laughing loudly, babies were crying, and every now and then the priest would stop, apparently to hold a little conversation with those nearest to him on the topics of the day. Anything more irreverent or less like a religious ceremony it would be difficult to imagine. In the midst of it all the priest seized the bridegroom's left hand and put a ring on his little finger. After some more chanting, reading, screeching, and general conversation he took a phial, which I presumed contained holy water, and crossed the foreheads of the bride and bridegroom with its contents. Again after an interval he produced a black cord which he bound round the body of the bridegroom under his outer garment, and tied a piece of scarlet thread round his head, and did the same to the bride, who must long since have been nearly stifled. In spite of the rapidity with which the service was read, what with chanting and talking at least an hour elapsed before the priest seized the heads of the bride and bridegroom, pressing them

against one another and waving his hand over them, which I presume was a blessing. He then untied the cords and threads, meaning I suppose that another spiritual knot had been tied, and then abruptly snatched the handkerchief out of the bridegroom's mouth and spread it over his own knees. For the first time there was a silence as of hushed expectation; then some silver coins, amounting I should say to about ten shillings, were dropped into the handkerchief, and the priest rose suddenly, put some of the money into his pocket, and proceeded to distribute the rest among the minor officials, on which arose the most furious clamour and dispute how the filthy lucre should be divided. But order was somehow at last restored and the bridegroom got up and walked to the door. The bride, however, seemed more difficult to deal with. Her mother and two or three other women seemed to be packing her up in some mysterious way against her will, rolling her about on the bench like some bale of goods. At last in the midst of her struggles a man, I presume her father, rushed in, put her on his shoulder, and carried her off, followed by the rest of the women."*

SLAVERY.

Officially slave-dealing is strictly prohibited in Egypt as well as in the dependent territory of the Upper Nile basin. In virtue of previous conventions made with England personal servitude should have already been completely abolished by August 4, 1884, within the limits of the Khedival possessions. But the articles of these treaties have remained a dead letter, and the representatives of Great Britain, now paramount in Egypt, have limited their action to the despatch of a circular recalling the law imposed on the Khedive. It seems probable that they will observe in this respect the same reserve that Gordon did in Egyptian Sudan, leaving to the owners the absolute possession of the men and women acquired by capture or by purchase. If the slave-markets are closed the traffic goes on all the same, while the grandees always find the means of procuring eunuchs to look after the women of their harems. The maintenance of slavery in Egypt is necessitated by these very harems, whose mysterious régime could not be enforced with servants free to break their contracts at pleasure. At the same time it is certain that outside the palaces of the highest Mohammedan circles, domestic service is gradually replacing slavery. All Negroes who apply to the police for their "paper of freedom" obtain it, and may take up any industry in any place they choose. Thus the Western conquerors, like their Arab and Turkish predecessors, have introduced a new social organisation.

"It should also be stated that in Egypt, as in most other Mohammedan countries, the slaves are usually treated with great kindness. They are regarded as useful members of the household by the head of the family, whose interest it is to look after their health, and make them feel as satisfied as possible with their position. The more content with their lot, the more willing they are to work, and they thus gradually learn to identify their interests with those of their masters. Hence they

* "The Land of Khemi," p. 164 *et seq.*

soon give up all desire of returning to their tribal homes, and begin to despise their kindred, regarding them as savages and 'infidels.' 'Here we are well cared for by our kind father,' said some slaves of the Dinka nation from the country south of Senâr; 'he clothes us, and when meal-time comes we sit under his roof and eat our fill, and at night we have good bedding and shelter. When we desire it he gives us money to go to the bazaar; and what belongs to him belongs to us. We are of his family. Why should we wish to return to the misery and incertitude of our early life?'

"Such appears to be the general feeling of those in servitude. They become, so to speak, members of the household of their masters. They benefit largely by the civilisation, such as it is, that surrounds them. They form ties and affections. They marry and have children, and they become thoroughly identified with the country and surroundings of those who own them.

"The female slaves, if really they can be called so, seem to sit as high at their dress tables as the lighter-coloured mistress whom they serve. Of ornaments they have plenty, silver and gold coins being woven into their innumerable thinly-plaited tresses. Amber, coral, and jasper necklaces fall in rows over their, when young, statuesque bosoms, here, as is the custom of the country, left untrammelled by robe or corset.

"To sum up briefly, the curse of slavery is not the actual holding of slaves, but the misery caused by the destruction of villages, the severing of family ties, and the cruelties perpetrated in the work of capture. People are dragged miles and miles without water, chained by the neck; in fact, the trails of the capturers may be followed by the skeletons of the captives left on the line of route. Hence, whatever may be the kindness shown by the master to his bondman, all must rejoice that the days of slavery seem at last to be numbered in all Mussulman countries brought under European influences. The Government of the Khedive, rightly influenced, is determined to stamp it out; and the presence of English officers now in the service of His Highness in the distant provinces of the Sudan will undoubtedly aid in effecting the extinction both of domestic slavery and of the slave traffic throughout Eastern Africa." *

LAND TENURE.

The administration of landed estates is also being modified through the intervention of Europeans in the internal affairs of the country. According to the strict letter of the Mussulman law the community of the faithful, represented by the *beit-el-mâl*, or public treasury, is the sole owner of the land, which can only be held temporarily by private persons such as mortgagees, who have come to inherit it by custom rather than legal right. However, this principle has long fallen into abeyance, and as in Europe, private proprietary rights have been established over a large portion of the Egyptian territory. Since this revolution, which allows the free exchange of land, its value has been greatly enhanced. The present

* "With Hicks Pasha in the Sudan."

proprietors themselves, who no longer pay the taxes in kind, have certainly benefited by the new order of things. At the same time a new social class has been constituted, that of the agricultural proletariates, a multitude of hand to mouth labourers, who have no longer any share in the land, and who are obliged to accept employment on any terms in order to live.* The lands of dispossessed peasants, nearly all confiscated for non-payment of taxes, have enlarged the personal domain of the sovereign, of various members of his family, and of many high dignitaries of State. The Suez Canal Company has also become one of these large landed proprietors. All the estates that under sundry titles have fallen into the hands of

Fig. 106.—DOMAINS OF THE DAÏRAH IN THE DELTA.

Scale 1 : 2,500,000.



the khedival family are estimated at about one-fourth of all the arable land in Egypt. Between Assiut and Bedrashein nearly all the soil belongs to the Khedive. Another fourth of the land consists of the so-called *ushuri*, or "tithings," held in absolute right by those cultivating them. On the other hand the lands of the poor, divided into small lots round the villages, and comprising, with the commercial possessions, about half of the country, are burdened with the *karaj*, a variable tax, which may be increased at the pleasure of the Government, but which still averages about one-fifth, as in the time of Joseph. On paying this tax the occupier of the

* Average wages of the peasant labourer : fourpence to sevenpence, according to the season.

land still remains none the less at the mercy of the State. He holds it only on sufferance, nor are the rights of his heirs acknowledged until they show themselves capable of cultivating the estate bequeathed to them and paying the imposts. If they want to change their karajieh lands to an absolute property, they can do so only on condition of paying in advance a six years' tax, either in a lump sum or by instalments. Besides a safe title, these anticipated disbursements relieve them in future from half of the land-tax. The *wakf* (*wakuf*) estates belonging to the mosques or schools will probably ere long change hands in part, if not altogether. The confiscation of this mortmain property might enable the Government to cover the present annual deficits.

THE KHEDIVAL DOMAIN.

Officially the largest landed estate in Egypt might seem to be that of the Khedive. But this domain, the so-called *dairah-sanieh*, having been mortgaged to European lenders since the year 1878, is administered by a commission, whose headquarters are not in Egypt, and the real owners are at present the European bankers. A considerable portion of the estate is rented to speculators, who sub-let to the peasantry. Certain parcels are directly ceded to the labourers; but a large part of the *dairah*, which would certainly be brought under cultivation if in the hands of the fellahin, is allowed to lie fallow. For direct exploitation the creditors of the Khedive have recourse either to hired labourers, or to agents and "middle-men," who arrange with the village headmen for the hands required to till the land. Their work is remunerated by a regular pittance, or by personal gifts made to the gangers. All systems of payment are nicely graded, from the gratuitous *corvée* to the amount of direct wages freely determined between employer and labourer. But so many intermediaries have to receive a share of the profits in the cultivation of the khedival domain, so many interests claim compensation for their "disinterested" services in the "regeneration of Egypt," that the revenues of these otherwise extremely fertile lands are frittered away to little over twenty shillings an acre. There is even a yearly deficit if to the current expenses be added the interest due on previous debts.*

IRRIGATION—THE INUNDATIONS OF THE NILE.

To the contrast between the estates of large proprietors and the karajieh holdings of small owners corresponds in many places the contrast between the systems of irrigation. In this respect it is necessary carefully to distinguish between the so-called

* State of the Khedival domain at the date of the cession, October 31, 1878:—

Acres directly cultivated	192,660
„ leased	134,300
„ granted to the peasantry	37,670
„ waste or fallow	82,350
	<hr/> 446,880

sefi and *nili* lands. The latter, as indicated by the name itself, comprise all those tracts that would be flooded by the annual inundation but for the retaining dykes, as well as those reached through infiltration by the deep waters derived either from the main stream or from natural or artificial channels excavated at a slight depth below the surface of the ground. The lowest dykes derive their waters at a depth of about 13 feet below the cultivated lands, and are flushed only during the period of the inundations, remaining dry for the rest of the year. During the last century the whole of Egypt was watered exclusively by means of basins disposed at different elevations along both banks of the river, and receiving their supplies through the *nili* canals, and over three-fourths of the cultivated tracts in Upper Egypt are subject to the same method of irrigation.

The *sefi*, that is, "summer" canals, all of recent origin, are excavated below the mean low-water level from 26 to 30 feet below the surface, so that they are reached by the stream even at the very height of the dry season. In Upper Egypt they are disposed parallel with the river and at a very slight incline, so as to bring them at once to the level of the lands to be irrigated. But in Lower Egypt, from which the system of irrigating basins has entirely disappeared, the *sefi* canals remain everywhere at a lower level than the fields, to which the water must be raised by means of steam-engines, *sakiehs*, or *shadufs*. One of these *sefi* canals is the famous Mahmudieh channel, which derives its water from the Nile in order to irrigate the tracts skirting the desert as far as the city of Alexandria, and which serves at the same time as a great navigable highway. But having become partly choked by the mud, it is no longer deep enough to admit a regular current, hence has to be partly filled by means of steam-engines established at Atfeh, on the Rosetta branch of the Nile. The Damietta branch also feeds numerous summer canals, thanks to its relatively high elevation above the plains of the delta.

The *sefi* system was first introduced under Mohammed Ali, when the cultivation of Jumel cotton was begun. By this method are still almost exclusively raised the larger and more important crops, such as sesame, sugar, and cotton, which are thus watered for three months continuously before the period of the ordinary inundation. So it happens that the small holdings have no share in the benefits reserved for the large estates irrigated during the period of low water. The high State functionaries and rich money-lenders alone derive any advantage from growing these larger industrial crops. Yet they are not the only contributors to the maintenance of the works, the cost of which is enormous, owing to the mud constantly accumulating in the ditches and gradually filling them up in many places. A single year would suffice to convert a *sefi* canal into a simple *nili* channel but for the numerous gangs of *fellahin* employed for weeks and months together on the work of excavation. The *sefi* canals taken collectively represent a quantity of deposits about half as much again as that of the Suez Canal, and every year the amount of mud and earth required to be again displaced to keep open the dykes is not less than one-third of the original deposits.



SEFI CANAL AT FIDEMIN-EL-FAYUM.

THE FORCED LABOUR OR CORVÉE SYSTEM.

For these vast works the combined labour of the whole population is needed. As the daily labour of the fellâh scarcely suffices on the average to displace half a cubic yard of earth, or three-quarters at the utmost under favourable conditions, the days of labour on these works must be reckoned at tens of millions. In 1872 Linant de Bellefonds estimated at 450,000 the number of hands employed on an average for two months every year in clearing out the *sefi* canals. Each fellâh has, moreover, to attend to the *nili* canals of his commune, as well as to the particular canal bringing water to his own fields. On the Mahmudieh Canal alone, Mohammed Ali employed 313,000 under the *corvée* system of labour.

Nor is this all. The exceptionally high inundations of the Nile might be the cause of widespread disaster were the dykes not carefully maintained, and even under dangerous circumstances raised to a higher level. In 1874 all the summer crops—sugar, cotton, durrah, maize—were threatened with complete destruction, and the whole wealth of the land would have been engulfed, had not the entire population, animated by a sense of the common danger, kept up an incessant struggle with the rising waters. For over a whole month 700,000 men laboured to repair and strengthen the embankments, so as constantly to make head against the swollen stream. Frequently a third of the population has been simultaneously engaged in this struggle with the Nile, and even in normal years the Government calls out 160,000 men under the *corvée* system, drawn in about equal proportions from Upper and Lower Egypt.

These constant efforts to adapt the land to the fluvial conditions have seldom a spontaneous character. Summoned under the *corvée*, and receiving from the authorities nothing but a shovel and a basket, the peasantry present themselves in gangs at the works, preceded by their Sheikh-el-Beled, or village headman, and often accompanied by their women and children. Temporary encampments are established along the embankments, and the men enter the canal to dredge and bring up a little mud, gradually heaping it to a height of 30 or 40, and even 50 feet, over the side of the dyke. The women do the cooking—that is, prepare a few cakes of durrah in the fire; the children tumble about in the sand, while the armed pickets tramp silently up and down the embankment. It is doubtless natural and reasonable that all the inhabitants should take their share in the maintenance of the canals. From the mud of the Nile springs all the wealth of Egypt, and in this respect the whole population has a common interest. The canals, also, which distribute the fertilising waters, and but for which the riverain peoples would be reduced to starvation, represent an amount of labour far beyond the resources of private enterprise. But, on the other hand, it seems only fair that this work, to which all hands contribute, should be really carried on in the interest of all. It should tend to promote the prosperity not only of a few large domains, but also that of the smaller village holdings. It should certainly not weigh as a heavy burden exclusively on the labourers who are too poor to purchase exemption or find substitutes for the onerous task. Nor should the wretched victims of the

corvée, wallowing in the beds of the canals, be allowed to suffer hunger or be decimated by epidemics, or be made to writhe under the lash of the cruel kurbash. The very monuments of Egypt have recorded for six thousand years the sad fate of the fellâh, bent beneath his load of mud while the overseer stands flourishing the scourge above his head. The names may change, but this ancient form of slavery still survives. As Amru said to the Caliph Omar, the Egyptian people "seem destined to toil only for others, without themselves deriving any benefit from their labour."

CONSERVATISM AND PROGRESS.

There are few other countries where the old usages, adapting themselves with difficulty to modern times, contrast more strikingly with the methods introduced by Western civilisation. While the ancient method of cultivation remains unchanged, and while the peasantry, regulating their work according to the yearly inundations, sow and reap always at the same period, make use of the same implements, gather the same cereal crops, eat the same bread, modern agriculture draws the water by means of steam-engines directly from the river, cultivates the exotic plants of India and the New World, employs improved ploughs, reaping, threshing, and sifting machines. To manure their fields the peasantry still rely on the most precarious refuse from their farms and pigeon-houses, while the scientific cultivators import from Europe and America chemically analysed phosphates and guanos. Railways run close to the old mud hovels; skilfully constructed iron or steel bridges span the canals and the great branches of the Nile, while elsewhere the fellâh must swim or wade through the stream, his tunic gathered like a turban round his head, or else crosses over seated on a mat of palm-leaves floated on inflated skins or calabashes, or on a string of tufted foliage, which he propels by converting his shirt into a sail. And, again, on the very sands and marshes skirting the wilderness, lighthouses with electric burners, the "suns of the Christians," as the natives call them, light up between the Mediterranean and Red Sea the great navigable highway which, even in these days of colossal undertakings, stands out as one of the most stupendous works of human industry.

But amid all these strange contrasts between the old conservatism and the new ideas, the clearest signs of material and intellectual progress are everywhere conspicuous. "Nothing," remarks the distinguished traveller, Charles Beke, "surprised me more in my present journey, though I have visited Egypt frequently since 1840, than the many changes for the better that were observable in the whole country. When one has passed the Mareotis Lake, and the barren district west of the Rosetta arm of the Nile, the land presents most distinct evidences of higher and more extended culture.

"I was told that in this part of Egypt, where in 1850 only 100,000 acres of land were under cultivation, now double that extent is planted. The cotton harvest is now just over, and the fields are being ploughed. Once I saw what I have never seen before, a camel drawing the plough. Far and wide there waves a green sea of cornfields or of rich pasture-land, on which cattle, asses, sheep, and goats

are grazing. Trees have been planted, and not only along the roads; some places have been set so thickly as almost to appear like little forests. The route across the delta, on the clear sunny day on which I travelled, was indeed charming, and I had often to remind myself that I was really in Egypt, so totally changed was the picture; for here and there, also, the tall chimney of some manufactory was to be seen rising above the trees or over the villages. Egypt will soon belong only geographically to Africa; in everything else it is becoming European.

"The condition of the lower classes, also, shows a marked improvement. Ophthalmia, perhaps the most painful scourge of Egypt, is now neither so widespread nor so intense as formerly; and if the people are not better fed than they used to be, they have at least sufficient for their wants. Those inhabiting the towns are remarkably improved. In Cairo there are not nearly so many barefooted people as formerly; and they are not contented with slippers, but wear European boots. The fellahs, or peasants, also are decidedly improved. Their mud huts are better built, and especially better roofed; indeed, here and there peasant houses of quite European type are now to be seen.

"No doubt this rapid progress in Egypt has its shadow side. Like the children of Israel of old, the people do not work for themselves, but are in heavy bondage almost beyond their powers. Yet this development under high pressure is undeniably to the advantage of the country. The greatest and most important, because most universally active change, is certainly that of the improvement in the climate, brought about by the more extended cultivation, and especially by the numerous plantations of trees. Egypt is in a fair way to overturn its proverbial rainlessness. In Alexandria rain now falls even to excess; and Cairo, of which the prophet of all travellers, Murray, in his handbook, still maintains that it enjoys at most five or six light showers in the course of the year, had to record not fewer than twenty-one such in the past year. I myself experienced a rainy day there quite as wet as any known in England. The consequences of it were that the unpaved streets were covered ankle-deep with mud, and all traffic except that in carriages was at an end.

"Naturally the ignorant Arabs ascribe these changes to supernatural agencies, and since the year corresponds with that of the ascent of Mohammed Ali to the throne, the witchcraft is supposed to emanate from him and his dynasty."

THE SUEZ CANAL.

The channel between the two seas, after having perhaps existed as a natural artery for a short period during quarternary times, is known to have been indirectly restored by the Pharaohs of the nineteenth dynasty, over thirty-three centuries ago. A tradition recorded by Strabo attributes the construction of the canal to Sesostris. Herodotus also tells us that Nekos, son of Psammaticus, began near Bubastes a canal which skirted the quarries, that is, the hills now known as the Jebel-Mokattam, thence trending eastwards to the Red Sea. A hundred and twenty thousand hands had already perished on these works of canalisation between the Nile and the coast,

when their farther progress was arrested by an oracle which declared that they were being executed "for the benefit of a barbarian."

And it was, in fact, a foreigner, King Darius of Persia, who opened the communication between the Nile and the Gulf of Arsinoë, consequently between the Mediterranean and Red Sea, by a well-constructed canal, wide enough, says Herodotus, to allow two triremes to pass each other in mid-stream. According to Diodorus Siculus, the same king even entertained the idea of cutting a canal from sea to sea, between the Gulf of Pelusium and the Red Sea. The works seem to have even been begun, for the banks, some 16 feet high, are still to be seen of a ditch from 160 to 180 or 200 feet wide, running from Lake Timsah by the Gisz towards El-Kantara. But it was feared that the "waters of the Red Sea, standing at a higher level than the plains of Egypt," would flood all the land, and for this reason the works were discontinued. Monuments bearing inscriptions in four languages—Persian, Medo-Scythian, Assyrian, and Egyptian—were erected on the banks of the canal near Suez. These inscriptions record the fruitless attempts made by Darius to accomplish the work successfully carried out in our days. The fear entertained by the Persian monarch—a fear still shared by most engineers down to the middle of the nineteenth century—is all the more easily understood when it is considered that the mean level of the southern waters does in fact exceed that of the Mediterranean at Pelusium. At ebb there is scarcely any perceptible difference, but at flow the Red Sea is considerably higher, in exceptional cases as much as 90 or 100 inches. In the time of Darius the current setting northwards in consequence of this difference of level would have even been stronger than at present, for the channel was narrower.

But the old canal derived from the Nile gradually silted up, and the ditch cut across the isthmus became choked with sand and mud. Nevertheless the memory of the work accomplished did not perish, and more than one Egyptian ruler continued to regard the project of uniting the two seas as an enterprise glorious beyond all others. Ptolemy II. is said to have restored the canal, and, arguing from certain somewhat obscure passages in Strabo and Diodorus, some writers have even asserted that the cutting was effected directly from gulf to gulf. Skilfully constructed sluices gave access to vessels without flooding the surrounding low-lying tracts. However, the traffic between the two marine basins was doubtless insufficient to pay for the maintenance of the banks and sluices, and it has been supposed that in the reign of Cleopatra the navigable highway must already have been again closed. At least, according to Plutarch, the Egyptian queen endeavoured to have her ships transported overland to the Red Sea, in order to escape, with all her treasures, from Octavius after the battle of Actium. Nevertheless it is quite possible that the canal may even then still have existed, if not permanently at least during the Nilotic inundations. The time when she wanted to escape happened to coincide with the period of low-water, when the canal would have been dry.

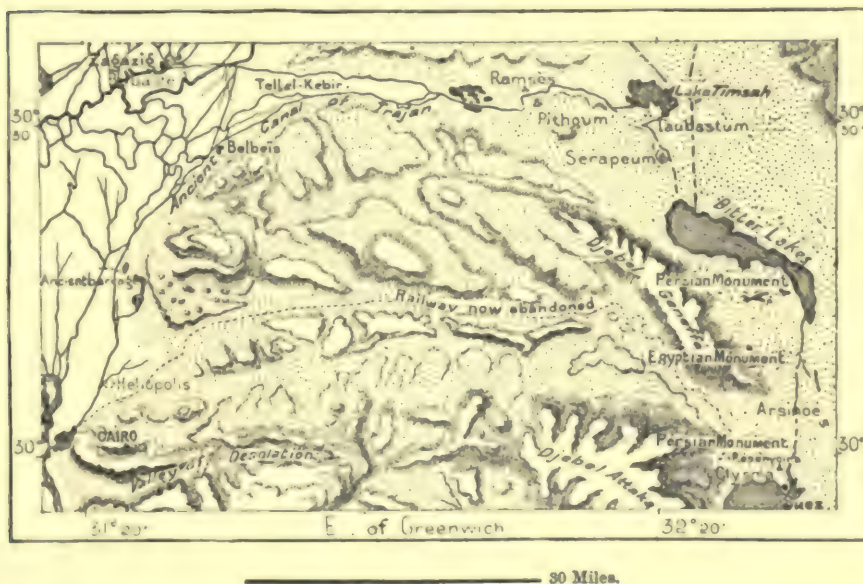
After the Ptolemies the Roman conquerors took up the dream of uniting the two seas. Trajan, who tried his hand at so many great enterprises, set to work also on this project, and under the reign of Hadrian boats were navigating the

so-called "River of Trajan," excavated, like the older river of Nekos, between the Nile, the Timsah, and the Bitter Lakes, across the desert zone skirting the arable lands. As Letronne has observed, the exploitation of the great porphyry quarries at Mount Claudian would have been unintelligible, unless some waterway existed between the sea and the river for forwarding the huge monoliths extracted from the mountain. They could not certainly have been transported to the Nile Valley over the intervening hills and rocks of the Arabian range.

Like most of the works executed by the Romans, Trajan's Canal was made to last, and in fact it was maintained for centuries. Makrizi tells us that in the early period of Islam it was still accessible to vessels. After seizing Egypt, Amru had little more to do than clear out the channel and restore the sluices. But he appears to have harboured even more ambitious views, intending to open a canal directly

Fig. 107.—TRAJAN'S CANAL.

Scale 1 : 1,300,000.



from the Red Sea to Farama on the shores of the Gulf of Pelusium, possibly by utilising the cuttings previously made by Darius and the Ptolemies. But Omar fearing, as is said, lest the Greeks might take advantage of this highway to attack the pilgrims journeying to Mecca, refused to sanction the work. Nor did the canal restored by Amru last very long, having been closed a hundred and thirty-three years afterwards by order of the Caliph Abu Jafar-el-Mansur, to prevent some rebel from receiving his supplies.

During the interval of nearly eleven centuries from that epoch to modern times, the slow work of nature gradually effaced the work of man. Houses, sluices, dams disappeared; the dykes became choked by alluvial deposits and sands, while marshy depressions took the places of the embankments. The coast-line has been modified round the gulfs and lagoons; but numerous vestiges nevertheless still

survive of the former Egyptian, Roman, and Arab works. In some places, and notably near Suez, the dykes, built with such hard stone that the Arabs take them for natural rocks, rise here and there some 18 or 20 feet above the plains.

Fig. 108.—SUEZ IN THE YEAR 1800.

Scale 1 : 350,000.



It is probable that to a barrage, the remains of which are still visible, the ground-sill of Gisir owes its Arabic name of "dyke."

While the mud and sands were obliterating the monuments of the Pharaohs, Ptolemies, Trajan, and Amru, the Sultans of Constantinople, after the reduction of Egypt, frequently entertained the idea of renewing the works of their predecessors.

But the project did not take definite shape till the time of the French expedition. With the expedition came a number of distinguished naturalists, eager to accomplish great things, and one of the greatest to them seemed the idea of reuniting the two seas. Lepère and other savants forthwith set to work to survey the surface of the isthmus, and accurately determine the conditions under which the enterprise might be successfully undertaken.

Unfortunately the results of this exploration were vitiated by a fatal error. Lepère fancied he had found the level of the Red Sea nearly 33 feet higher than that of the Mediterranean. Under the influence of this serious miscalculation he allowed himself to be influenced by the illusion of the ancients, who feared the low-lying tracts on the Mediterranean coast would be engulfed by the waters of the Red Sea were the project carried out. He accordingly gave up the idea of cutting a direct maritime canal, although recognising how greatly the trade of the world would be benefited by connecting the two basins by a deep channel not subject to the alternative rise and fall of the Nile waters. Falling back on the scheme of the Pharaohs, he proposed to construct a canal, from 14 to 16 feet deep, running from Cairo to Suez, in four sections at four different levels, two filled with the sweet water of the Nile, two with the saline water of the Red Sea. This canal was further to be completed by a navigable highway flowing from the head of the delta to the port of Alexandria. Being accessible only to river craft, the canal projected by Lepère could have been used for inter-oceanic traffic only during the periodical inundations of the Nile.

The French occupation of Egypt was too short for the work to be undertaken. But the idea of separating Asia and Africa by a new Bosphorus was destined never again to be laid aside. It even became the dogma of a new religion, the Saint-Simonians having introduced it into their "articles of faith." Their journals were already discussing the question in the year 1825, and when several members of the sect had to leave France, the study of the Suez Canal was one of the chief reasons that induced them to turn towards the East. Later on, when the Saint-Simonian religion had ceased to exist, but when most of its former adherents had become men of influence in the commercial world, the scheme found its most zealous champions amongst them.

At last public opinion became so clamorous, that it was found necessary to undertake a fresh survey, in order to verify or set aside that of Lepère, which Laplace and Fourier, besides many other savants, had always regarded as erroneous. In 1847 a European society was instituted, and under the direction of the engineers Linant, Talabot, and Bourdaloue, accurate levellings were taken across the isthmus, from Suez to Pelusium. Henceforth it was once for all placed beyond doubt that, apart from the inequalities caused by the higher tides in the Gulf of Suez, the surface of the two seas presented but slight discrepancies of level. The operations of the Bourdaloue survey were again checked in the years 1853, 1855, and 1856, the results being each time almost identical.*

* Mediterranean at Tineh, on the Gulf of Pelusium :—Low water, 0.0 metres ; high water, 0.38 metres. Red Sea at Suez :—Low water, 0.7414 metres ; high water, 2.0586 metres.

After the settlement of this important point in physical geography, nothing more apparently remained to be done before proceeding to construct a direct canal across the isthmus. But the first project, presented by M. Paulin Talabot, one of the engineers engaged on the survey, proposed the construction of a canal from Suez through Cairo to Alexandria. This scheme, which has been recently again adopted by some English engineers in opposition to the present undertaking,* involved the construction of locks and sluices, in order on both sides to reach the level of the Nile above the head of the delta. It would have also been necessary to provide for a system of flood-gates, to resist and regulate the fluvial inundations, besides a tow-bridge across the Nile between the two sections of the canal, in order

Fig. 109.—PROPOSED FRESHWATER CANAL FROM SUEZ TO ALEXANDRIA.

Scale 1 : 2,500,000.



to tow the vessels from one side to the other. As a highway of navigation, the inferiority of this canal, winding through Lower Egypt, compared with that across the isthmus, dispensing with sluices and nearly three times shorter, is self-evident. But the primary object of this canal, which would have been 240 miles long, was the irrigation of the delta rather than traffic. The interests of navigation and irrigation however being different, and even antagonistic, seeing that shipping requires a low level, while cultivators naturally seek to raise the bed of their artificial streams as high as possible, it would be a mistake to construct a canal

* John Fowler and Benjamin Baker, "A Sweet-water Ship-canal through Egypt," *Nineteenth Century*, No. 71, January, 1883.



SUEZ CANAL AT THE SERAPEUM

for this twofold purpose. Should the riverain tracts of the delta ever be enclosed by a circular artery, this canal will probably be utilised exclusively for irrigation and the local traffic.

The firman granting a concession to pierce the isthmus directly from sea to sea, was at last signed in the year 1854. While signing this document, the Sultan was himself incredulous as to the possibility of executing the work, and even among the engineers engaged on the vast undertaking, many were wanting in the confidence required to stimulate their efforts. But Ferdinand de Lesseps, in whose favour the firman had been signed, was a man of strong faith and tenacious will. He was discouraged neither by financial difficulties, nor by faint-hearted friends, nor yet by the secret or avowed opposition of adversaries. Amongst these adversaries was the British Government, fearing the opening of a direct route to India, of which it was not sure of always holding the key. Yet it was compelled in its turn to acknowledge itself vanquished, and on November 17th, 1869, a whole fleet of steamers followed in gay procession, bearers of the Khedive's invited guests from Port Saïd to Lake Timsah.

Fifteen years had sufficed to complete this colossal undertaking. But to bring it to a successful issue, new engineering methods and new mechanical contrivances had to be devised. A sum of nearly £19,000,000, nearly half subscribed in France, had been expended, apart from the numerous substantial services contributed by the Egyptian Government, such as concessions of land, the erection of lighthouses, harbour dredgings, pecuniary advances without interest, gangs of labourers under the *corvée* system, representing at least a capital of some £4,000,000. The number of natives engaged on the works averaged about twenty thousand.

This great highway, a veritable marine strait, which is visited by sharks and cetaceans, and where are now intermingled the various flora and fauna of the Mediterranean and Red Sea, presents dimensions which at the time seemed prodigious, but which are already acknowledged to be inadequate. The canal, which is 98 miles long from sea to sea, and from 200 to 330 feet wide between the banks, has a depth nowhere less than 26 feet, and in some places nearly 28 feet. Dredges are constantly engaged, clearing out the sand and mud, which the wash of passing steamers causes to accumulate on the bottom. Without including these subsequent dredgings, which amount to about 21,000,000 cubic feet yearly, the excavations represent a mass estimated at 2,910 millions of cubic feet, equal to a pyramid 1,100 yards square and 830 feet high.

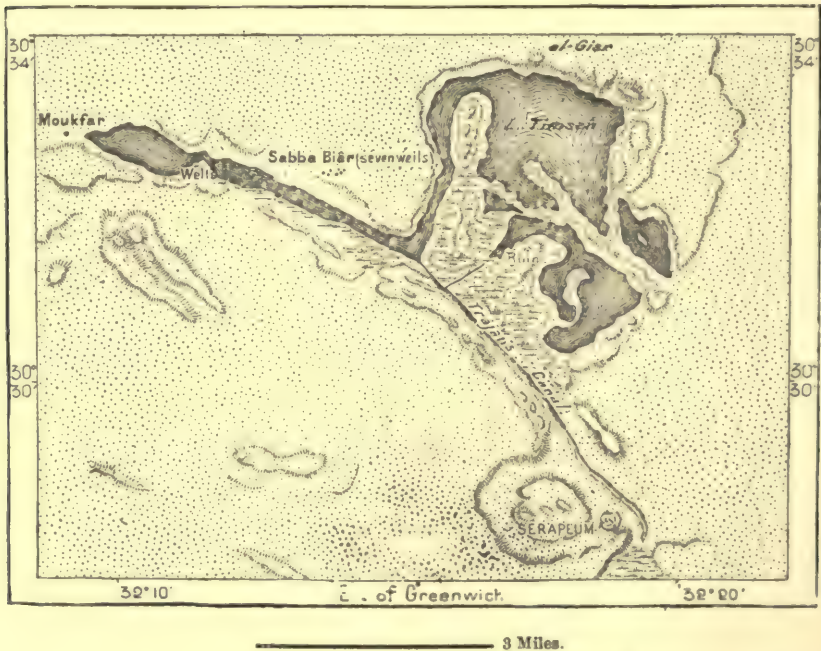
From a mere lagoon, Lake Timsah, that is, of the "Crocodiles," from which, however, these animals had long disappeared, has been transformed to an inland sea. The basin of the Bitter Lakes has also received from the Red Sea a volume estimated at seventy billions of cubic feet; the vast salt-beds formerly occupying this depression are being gradually dissolved under the influence of the currents setting alternately north and south. The canal presents a superb spectacle, especially at El-Gisar, between the two lines of dunes rising on either side some 50 feet above the surface. And it is difficult to suppress the feeling of wonder

produced by the scene as viewed from the Port Saïd lighthouse, commanding as it does a panoramic prospect of the city rising above the sands, the vast harbour with its wet-docks and side basins crowded with shipping, the white piers disappearing in the distance amid the blue waters of the Mediterranean, and in the interior those huge steamers, like floating palaces, gliding away between the surrounding sand dunes as if propelled by some magic force across the isthmus.

The traffic of the Suez Canal has developed more rapidly than its constructors expected. Without the aid of tugs, sailing vessels are unable to navigate the Red Sea in either direction, either against the northern winds or against those from the south blowing directly into the gulf. But for the Indian traffic sails have been superseded by steam; ships of a special build have even been constructed

Fig. 110.—LAKE TIMSAH.

Scale 1 : 1,000,000.



for this inter-oceanic service through the canal and the Red Sea, and the mean tonnage continues to increase from year to year. During the year 1883, a solitary sailing vessel passed from sea to sea, whereas on an average ten steamers every day availed themselves of this route.

Hence the necessity for enlarging this navigable highway has already arisen. Certain sharp turnings will also have to be got rid of, as has already been done at El-Gisar, and several other improvements will have to be made, such as the deepening of the channel, the completion of the stone facing to the embankments where the shifting sands are too easily eroded by the wash, the construction of ports in the riverain lakes, and especially a general widening of the whole canal in order to be able to dispense with the sidings, or "shunting stations," which now

occur at intervals of 6 or 8 miles along the route. The original projectors had anticipated a yearly traffic of six million tons; but provision must now be made for a double and even fourfold movement at no distant date. It is proposed to treble the width of the present channel, so that steamers may pass each other without slackening speed, and also to prevent the whole traffic from being blocked by the grounding of a single vessel, as so frequently happens at present.

England, which formerly opposed the opening of the canal, is the very power now most urgent in calling for its enlargement. But the results afford a ready explanation of this change of attitude. The canal has in fact become an almost exclusively British highway, and an eighth part of the whole trade of Great Britain, representing a value of over £80,000,000, passes through the Isthmus of

Fig. 111.—GREAT INTERNATIONAL ROUTES OF THE OLD WORLD.

Scale 1: 170,000,000.



Suez. The British Government has also become one of the chief shareholders, and since the occupation of Egypt it practically controls this route, which it may open or close at pleasure, as was seen before the battle of Tel-el-Kebir, when all traffic was for a short time suspended, in spite of the conventions guaranteeing the neutrality of the passage between the two seas. Thus Great Britain, which feared lest the marine route to India might fall into the hands of her rivals, has succeeded in securing its possession at least for the present. At the same time, according to the terms of the international convention concluded in 1885, the canal is henceforth declared an open highway under the joint guarantee of the European powers. It is thus absolutely free to the ships of all nations, and in time of war even to those of belligerents; which, however, cannot remain in the canal for a

period of more than three days, nor during their stay commit any acts of hostility against the vessels of their antagonists.

The terms of this important international agreement are briefly resumed in the subjoined series of articles, adopted after much discussion by the Suez Canal Commission:—

“Article 1. The Canal shall remain open both in time of peace and war to merchant and war ships without distinction of flags. The contracting parties undertake to place no obstacle in the way of free passage through the Canal either in time of peace or war, nor to blockade the Canal, nor to subject it to any other measure of war. Article 2. As a sweetwater canal is recognised to be indispensable for a maritime canal, cognizance is taken of the Khedive's obligations to the Suez Canal Company in that respect, and the Powers are pledged not to compromise in any way the safety of the sweetwater canal. Article 3. All parties agree not to damage the material for building and repairing purposes. Article 4. It is agreed that no fortifications shall be erected on such points as could command or threaten the Canal and serve as the basis for offensive operations, nor shall any such point be occupied by troops. The maritime entrances to the Canal, as also the territorial waters, shall be excluded from all military operations. Article 5. Although in time of war the Canal will be open to the passage of the belligerent fleets, no acts of hostilities and no measure preparatory to the same shall be carried out in the Canal or in the territorial waters of Egypt, even should Turkey be one of the belligerents. No troops, provisions, ammunition, nor war material shall be landed there. The passage of ships must be as rapid as possible, and the stoppage at Port Saïd or Suez must not exceed twenty-four hours. There must be an interval of twenty-four hours between the departure of ships belonging to nations at war. Articles 6 and 7 refer to captured vessels, which will be treated as belonging to belligerents. For all damage to the Canal or to the material belonging to it, the Power whose ship has caused the damage will be held responsible, though the right of appeal is reserved. Article 8. No Power will be entitled to have more than one war ship at a time in the Canal, and more than two at Port Saïd and Suez. Article 9 provides for the rights of the Sultan and of the Khedive. The measures required for the defence of Egypt in case of need must not affect the safety of the Canal. Article 10. A Commission composed of representatives of the signatory Powers at London, on March 17, 1885, to whom shall be added an Egyptian delegate with a consultative voice, will sit under the presidency of a special Turkish delegate, and make arrangements with the Suez Canal Company for the enforcement of the present regulations for the Canal navigation and police. The said Commission shall, within the limits of its attributions, see to the execution of the present treaty and submit to the Powers proposals for securing its observance. It is understood that the Commission shall not infringe the Sultan's rights. Article 11 prescribes that Egypt shall within the limits of its rights take measures to ensure respect for the treaty, and in case of need shall appeal to Turkey and to the signatory Powers. Article 12 stipulates that none of the signatory Powers shall seek territorial or commercial advantages or privileges of any kind in connection

with the Canal. Article 13 provides for the Sultan's rights, and, finally, the concluding article is to the effect that the Powers will communicate the treaty to those States which have not signed it, and will invite them to endorse it."

TOPOGRAPHY.

While new towns are springing up in Egypt, the ancient cities are crumbling to dust. Most of the larger centres of population stand at some distance from the ruins marking the sites of former capitals. But these ruins, far more interesting than most of the modern towns, still relate the history of Egyptian culture. In many places the hovels of the fellahin, small cubical blocks of brick or mud covered with a reed roof or a terrace of beaten earth, are almost lost in the shade of mighty gateways and peristyles of temples. Since the scientific exploration of Egypt has been actively begun, fine monuments have been rescued from the sands in which they had long been buried; but many others have disappeared for ever. The salt-petre with which the sands and alluvial dusts are impregnated gradually corrodes the hardest stones of these buildings; treasure-seekers demolish their walls; while still greater destruction is caused by the peasantry, who make the *sebakh*, an excellent composition, by mixing the dust of the ruins with earth. The limekilns have consumed layer after layer of the temples built with limestone, so that the monuments of sandstone, which can scarcely be utilised for modern structures, have suffered least from these destructive processes.

The Egyptian villages bear the most diverse names, according to the origin of their inhabitants, or the tenure of the soil. Thus occur such names as *Nahieh*, *Kafr*, *Ezbeh*, *Nag*, *Abadieh*, *Menshat*, and *Nazleh*, this last term, which means "settlement" or "colony," being applied to villages built by Arab nomads who have become cultivators. The villages also frequently shift their sites, owing to the inundations, or the opening of some fresh canal. In the same way their names often become changed, according to the social status of the proprietors by whom they are purchased. Yet in these villages are still to be read the records of ancient Egypt. The country has been compared to a palimpsest or mediæval parchment, on which the Bible has been written above Herodotus, and the Koran above the Bible. In the towns the Koran is the most legible, while in the rural districts Herodotus reappears.*

MAHATTA—PHILÆ.

Classical Egypt begins at the First Cataract, at the spot where the Nile craft from Nubia still land their cargoes of gums, ivory, and ebony, in the shade of the palms and sycamores fringing the *Mahatta* beach. At Mahatta, which stands on the right bank, the river is still smooth as a lake; but towards the north we already perceive the black reefs, amid which wind the foaming currents of the rapids. But before plunging into this labyrinth of falls, the sluggish waters wash the shores of a cluster of verdant isles, one of which is the famous *Philæ*, the *Ilak* of the

* Lucy Duff Gordon, "Letters from Egypt."

Egyptians, the holy island, whither was transferred the tomb of Osiris from Abydos. Of all solemn oaths the most solemn was that sworn by the "Osiris who dwells at Philæ." It is a small island, less than half a mile in circumference; but its outlines describe a charming oval, and there is no more graceful monument in all the land than the kiosk on the east bank, whose festooned columns and floral capitals rival the elegant forms of the shapely palm-stems overshadowing them. This Egyptian edifice, dating from the time of Tiberius, is one of those that have been most frequently reproduced by the pictorial art. It bears neither reliefs nor inscriptions; but it recalls the outlines of the Erechtheon at Athens, and it occupies a lovely site.

The other monuments on the island, temples of Isis reconstructed after the conquest of Egypt by Alexander, are more remarkable for their inscriptions than for their architecture. Perfectly preserved paintings are still visible on their columns. Philæ has become famous in the history of archæological studies through its two bilingual inscriptions, one of which, a copy of the celebrated "Rosetta Stone," commemorates in hieroglyphic and demotic characters the triumph and greatness of Ptolemy V., named the "Immortal." At Philæ also was found the obelisk on which Champollion, after having already discovered the secret of the sacred writings, deciphered the name of Cleopatra. This precious monument, carried off by Banks and Belzoni, now forms part of a private collection in England.* Another inscription at Philæ, dated the eighteenth ventôse of the year seven, records the passage of the first division of the French army under the command of Desaix in pursuit of the Mameluks, beyond the Cataracts. At one time a tunnel passed under the narrow channel separating the island of Philæ from that of Biggeh, which was formerly also a holy land.

ASSUAN—ABU.

The valley through which flowed the Nile waters when they stood at a higher level than at present, now forms the main route of caravans skirting the Cataracts and transporting merchandise overland between Mahatta and Assuan. Here the Khedive Ismail constructed a railway nine miles long, for military purposes, and this line was extended by the English far into Nubia during the campaigns of 1884 and 1885. The importance attached for at least the last forty-seven centuries to this commercial highway is evident from the inscriptions in various languages engraved on its rocky walls. Its strategic value was also fully recognised, as appears from the remains of a rampart constructed to defend *Syene* from the attacks of the Blemmyes. The town lies below the Cataracts, on the right bank of the river, where its houses are disposed in amphitheatral form on the slopes of the rocks. The creek of Assuan is crowded with river craft, although less numerous than at Mahatta, and the *Shellali*, or "Men of the Cataract," swarm on the beach every time a dahabiyeh weighs anchor in the direction of the rapids. The bazaar is well stocked with arms and ornaments, ostrich feathers, skins of wild beasts, ivory,

* Amelia Edwards, "A Thousand Miles up the Nile."

wood, precious drugs, and other wares brought down from Nubia and the Upper Nile. The neighbouring date groves also supply abundant cargoes for the boats proceeding to Cairo and the delta.

Under its Arabic form of As-Suân, the old Egyptian name of *Suân* has survived for nearly five thousand years, and under its Greek form of Syene had already become famous in classical times. To geologists it recalls the granite and "syenite" quarries, which have been excavated to the south of the city for a space of nearly

Fig. 112.—ASSUAN AND THE FIRST CATARACT BEFORE THE OPENING OF THE RAILWAY.
Scale 1 : 250,000.



four miles. Here is still to be seen an obelisk 120 feet long, not yet entirely detached from the rock. Astronomers also are reminded by this name of the experiments here carried out by Eratosthenes, over twenty-one centuries ago. Assuming that Syene stood exactly on the line of the tropic of Cancer, which, however, is not strictly correct,* and finding that at Alexandria the shadow of the gnomon stood at a fiftieth on the day of the summer solstice, from these data Eratosthenes deduced the degree of the earth's curvature, and consequently so far

* Latitude of Assuan, $24^{\circ} 5' 23''$.

determined the dimensions of the planet. He did not take the direct measurement of the distance between Syene and Alexandria. But the Egyptian people, who knew so well how to turn their edifices towards the rising sun, must have also known not only the distance, but also the exact position of these places. Hence the common estimate accepted by the Greek astronomer must have come very close to the truth. If the measurement of the meridian made by him was in Egyptian feet, as is probable, his calculation was wrong by scarcely a sixty-fifth. The real length of the arc of the meridian, between Alexandria and the parallel of Syene, is exactly 787,760 metres, while the measurement of Eratosthenes gave 810,000 metres.*

Elephantine Island, which faces Assuan on the other side of a channel 500 feet wide, was also the site of a famous city. Here stood *Abu*, the "City of the Elephant," which afterwards, during the Greek and Roman periods, appears to have been the great emporium for the ivory brought down from the Upper Nile. But scarcely any of its ancient monuments have survived to the present day. Its temples were demolished in 1822, to supply building materials, and little is now to be seen except a Nilometer restored in 1870, and some heaps of ancient pottery on which the custom-house officers of the Roman epoch used to scratch their receipts. On the ruins now stand two villages of Barâbra Nubians. But Elephantine, the "Verdant" Isle of the Arabs, still possesses its magnificent date groves, whose brilliant foliage presents a striking contrast to the black rocks commanding the issue of the cataract.

OMBOS—EDFU.

The site of the ancient city of *Ombos* is now indicated only by the hamlet of *Kôm-Ombo*, situated on the west bank, and by the ruins of two temples dedicated to two rival dieties, Horus, god of light, and Sebek, the genius of darkness. But the stream is continually eating away this bank, with its sanctuaries and the sand encumbering them. The defile of *Silsileh*, or the "chain," below *Kôm-Ombo*, would be the most convenient point for constructing a barrage to raise the level of the river and divert a portion of the current to the irrigation canals. According to the proposed plan, the main channel would skirt the foot of the Libyan range, watering all the now barren tracts which stretch west of the Bahr-Yusef. But, as elsewhere pointed out, there are many serious objections to this scheme, which, if carried out, would probably have the effect of throwing out of cultivation some extensive districts along both banks of the Nile.

The *Silsileh* defilé, formed of sandstone rocks, is one of the most remarkable places in Egypt. On the east side the cliffs have been cut by the ancient quarrymen into avenues and cirques, affording an opportunity of admiring the rare skill with which they made choice of the finest-grained stone and the care with which they extracted it. In this respect the *Silsileh* quarries might still serve as models for our modern contractors. It might almost seem, remarks Mariette, as if the

* Fnyo, "Journal Officiel de la République Française," April 29, 1881.

THE EGYPTIAN SOUDAN.



whole mountain had been disposed in regular blocks, just as the skilful joiner cuts into planks the stem of some valuable tree.

On the west side the cliffs have been less encroached upon; but they are richer in sculptures and inscriptions. Amongst the bas-reliefs of a rock temple is an image of the goddess Isis suckling Horus—one of the noblest and most charming pictures left us by ancient Egyptian art.*

Two colossal pylons announce to the traveller from afar the approach to the city of *Edfu*, the *Teb* of the ancients, the *Apollinopolis Magna* of the Greeks and Romans. Of all the temples of Egypt that of Edfu has been the best preserved in all its parts, and although dating only from the epoch of the Ptolemies, it presents a purity of lines and a harmony of proportions justifying a comparison with the monuments of the most flourishing periods of Egyptian art; nowhere else had the traditions of the native builders been better preserved. This marvellous structure has been protected from the ravages of time chiefly through the sands of the desert. After removing the ninety-two hovels scattered over the mound and sweeping away the heaps of accumulated sand, Mariette found the edifice in almost as perfect a state as on the day of its dedication. Nothing is missing, except perhaps a few stones of the gateways and roof; even the outer enclosure, which concealed the temple from profane eyes, has been preserved intact. From the entrance of the court we see the perspective of colonnades and chambers stretching for a distance of nearly 430 feet, and throughout this vast space there is not a single recess whose ornaments and inscriptions, all in a state of perfect repair, do not clearly explain its purpose. Each chamber bears a separate name; thus one is the "house of books" or library, and the catalogue of the contents is here engraved on the walls.

The whole structure is itself a vast library, containing not only prayers and acts of thanksgiving in honour of the holy trinity, Harhut, Hathor, and Harpokhrot, but also religious scenes of every description, astronomic tables, histories of campaigns, representations of sieges and battles. The temple thus presents an encyclopædia of Egyptian records and mythology. But the chief interest of the Edfu monument lies in its seven-and-twenty geographical lists of Egypt and Nubia, enumerating all the provinces, with their products, their cities, and tutelar divinities. Thanks mainly to these nomenclatures, supplemented by fifteen other more or less complete lists found on various monuments along the banks of the Nile, Brugsch has been able to restore the ancient geography of Egypt.† From one of the pylons, which commands the entrance to the temple from a height of 125 feet, a prospect is afforded of the present town laid out like a chess-board in little cubic blocks of yellow earth, with the cupola and minaret rising in the centre—modest buildings at best compared with the great temple of the Egyptian gods.

"It may be asserted without any exaggeration that if the priests of Edfu could rise from their graves with all their sacred paraphernalia, once more to do honour to the supplanted gods of the Nile Valley, they would here find every chamber,

* Mariette, "Itinéraire de la Haute-Egypte."

† "Geographie des alten Ägypten."

every crypt, and every step just as they left it 1,600 years ago. Without replacing a single stone, the votaries of the divinity might march in solemn procession and in the prescribed route throughout the sacred precincts which have so long been desecrated; and should they have forgotten, during their long sleep, the purpose and use of each chamber, the inscriptions, marvellously well-preserved, would inform all who could read the hieroglyphics of the object to which each hall and cabinet was devoted. As regards preservation, Edfu is superior even to Denderah, for there the outer portions of the temple have disappeared, all but one propylon, and here no part has suffered any considerable injury.

"The sanctuary of Edfu was dedicated to the great god Horus, who overthrew the evil principle Seth, or Typhon, for his father's sake; and the town to which it belonged was therefore called by the ancient Egyptians Hut, after the winged sun-disc, or the city of the throne of Horus, or the city of the raising of Horus (to the throne of his father Osiris), or sometimes the city of the piercing (*tebu**) of Typhon, in the form of a river-horse. The Greeks compared Horus to their Apollo, the god of light or the sun, and called the city of Horus Apollinopolis.

"The sanctuary seems to have been founded at a very early date. Indeed Ptah, the oldest of the gods, is said to have built it for Ra. Kings of the twelfth dynasty, as well as Thothmes III., took part in the services carried on in it. The venerable structure was still intact at the time of the Persian dominion; but under the first Ptolemies it had become necessary to erect a new temple on the old site.

"Euergetes I., the third of the Lagide kings, began the building in accordance with the plans of the best Egyptian architects. It is a mighty structure, which was not finished till one hundred and eighty years later under Ptolemy Dionysius, or Auletes, the father of Cleopatra, in the year 57 B.C. Huge pylons stood at the entrance facing those worshippers who approached the sanctuary, decorated with the likeness of the Pharaoh as victor over his enemies. The visitor entering the bronze portals found himself in a vast peristyle surrounded on three sides by colonnades, and at the upper end of it rose a tall hypostyle, into which no glimpse was possible, since the walls connected the pillars which closed in the peristyle in front.

"The actual temple-building is closely allied to that of Denderah as to the arrangement and decoration of the chambers. After passing through the hypostyle or great forecourt, of which the roof is supported by eighteen columns, we come to a 'prosekos' with twelve columns, which is called the great banqueting-hall. Thence we proceed through the hall of sacrifice and the central hall of the 'repose of the gods,' and reach the sanctuary and grand throne, which consists of a huge block of porphyry brought to Edfu during the Persian dominion by the native Egyptian king, Nectanebos I., who ruled in opposition to the Persian invaders.

"The inscriptions in the laboratory and the little library are of the greatest scientific interest. The library was full of papyrus and leather rolls, and it adjoined the front wall of the hypostyle lying to the right of it. As at Denderah the roof was reached by a straight stair, and by a spiral flight of steps, and here

* "*Tebu*," meaning "piercing," is the Coptic "*Atbo*," whence the Arabic "*Edfu*."

also not the smallest spot is bare of inscriptions and pictures, including the 'calendar of festivals,' and others that have essentially contributed to our knowledge of ancient Egyptian geography." *

ESNEH.

Below Edfu a gorge opens eastwards, through which formerly descended the Hierusha marauders, ancestors of the present Ababdeh tribe. Against their incursions ramparts had been constructed across the gorge, the entrance of which was commanded by a fort. The village of *El-Kab* now occupies the site of this stronghold, which was the *Nekhab* of the ancient Egyptians, and the *Eilethia* of the Greeks. Amongst the numerous sepulchral caves excavated in the neighbouring rocks, one has been discovered in which are represented the victories of Ahmes, or Amosis, over the Shepherd Kings and the Ethiopian tribes.

Lower down, the valley of the Nile broadens out as it approaches the modern *Esneh*, whose fields and gardens occupy a considerable space on the left bank of the stream. The *Latopolis* of the Greeks, Esneh still preserves its ancient name of *Sni*. Capital of a province and an industrial centre, producing blue cottons, shawls, and various kinds of pottery, it ranks as one of the chief trading places in Upper Egypt. A portion of the surrounding plain is covered with sugar-cane plantations; a few dâm-palms are also still seen, but farther down the vegetation along the river banks is almost entirely restricted to date-trees.

The population of Esneh is of a very mixed character, comprising besides Coptic Christians and Mussulman fellahin, Nubians, various tribes of Bejas, and others from the oases. It was to Esneh that the Almeh of Cairo had been banished by Mohammed Ali, and here they are still more numerous than elsewhere. The ancient temple of Sni, dedicated to Kneph, "Soul of the World," was partially freed in 1842 from the heaps of sand and refuse encumbering it; but it still resembles a shrine in one of the Roman catacombs rather than an edifice erected above ground. The style of its architecture is much inferior to that of Edfu.

THEBES—LUXOR—KARNAK.

After describing a great bend below Esneh, and passing the pleasant village and sugar plantations of *Erment*, the Nile emerges on the plain where are seen scattered over both banks the still perfect or ruined monuments of mighty Thebes—a world of palaces, of colonnades, temples, and underground buildings. Nowhere else is such a splendid display of religious edifices presented to the view. Yet but a very small portion of Thebes of the "hundred gates" has been preserved. The four chief groups of ruins still standing enclose a space of not more than five square miles. But in the days when No, the "City," in a pre-eminent sense, better known under the name of Pa-Amen, or "Abode of Ammon," was the centre of Egyptian trade and power, it stretched much farther north along the plains skirting the

* G. Ebers, "Egypt, Descriptive, Historical, and Picturesque," ii., p. 326.

right bank of the Nile. During the inundations the groups of monuments here still rise like islets in the midst of the waters.

Luxor (*Luqsor*, Al-Aksorein) or "The Two Palaces," the largest village erected on the site of the ancient city, merely occupies an artificial mound or heap of crumbling ruins. But in this mound is partly buried a fine temple, which is at present being excavated. Before the monument stood two obelisks bearing inscriptions in honour of Ramses II. But of these one only survives, the other now occupying the centre of the Place de la Concorde, in Paris. Round the temple nothing is visible except shapeless masses of refuse and cultivated ground,

Fig. 113.—RUINS OF THEBES.

Scale 1: 78,000.



but towards the north-east stretches an avenue 2,200 yards long lined with pedestals, some still supporting fragments of sphinxes with the body of a lion and head of a woman, and holding in their fore-paws the effigy of Amenhotep III. This avenue is succeeded by an alley of sphinxes with rams' heads, leading directly to the monuments of *Karnak*—pylons, sculptured walls, naves, colonnades, obelisks, sphinxes, and statues.

Further explorations by Professor Maspero in the year 1885 have resulted in some important fresh discoveries. The great roofed sanctuary of Amenhotep III. is now completely cleared; the columns of the central colonnade are visible for over two-thirds of their height, and the original pavement of this part of the

edifice has been laid bare. At the northern end, that is to say, in the first great courtyard approached through the double pylons, a partial clearance has also been effected, revealing the existence of a small portico and several colossi, some prostrate, some still erect on their pedestals. The portico dates from Ramses II., and it now appears that the temple, when first constructed, was not separated as it now is from the Nile by an extensive space of rising ground; but that all the southern end of the building behind the sanctuary, and part of the western side, rose, as it were, direct from the water's edge, like the western gallery at Philæ. Some remains of a great quay, inscribed with the names and titles of Amen-hotep III., have also been brought to light. M. Maspero is able now to assert that Luxor, freed from the modern excrescences by which it has hitherto been disfigured, is for grandeur of design and beauty of proportions almost equal to Karnak. The sculptures with which the chambers and columns are decorated are of the finest and most delicate execution; while some of the wall subjects would not suffer in the comparison if placed side by side with the choicest bas-reliefs of Abydos.*

For a period of three thousand years, from the twelfth dynasty to the last of the Ptolemies, temple after temple was erected at Karnak. Everywhere the eye lights on miracles of workmanship; but the glory of this architectural museum is the chamber of colonnades, or "hypostyle," constructed in the reign of Seti I. It is the largest work of the kind in Egypt, one of those stupendous monuments which the memory instinctively conjures up when the mind passes in survey the great masterpieces of human genius. The ceiling of this chamber, which is no less than 76 feet high in the central nave, is supported by 134 columns, of which those in the middle row have a circumference of no less than 32 feet. All are covered with paintings and sculptures in intaglio, as are also the walls, and amongst the bas-reliefs there are some of the greatest historical importance, representing the victories of the Pharaohs over the Arabs, Syrians, and Hittites. In the "great temple" near this place is the famous "wall of numbers," a chapter of the national records, a portion of which was deposited by Champollion in the Louvre, and all of which are now known, thanks to the researches of Mariette.

To the same explorer is due the discovery of a geographical list of six hundred and twenty-eight names of peoples and places inscribed on gateways. Amongst the tribes enumerated, Egyptologists have succeeded in identifying several from Phœnicia and Palestine, from Assyria and other remote Asiatic lands, from Ethiopia and the region of aromatic herbs stretching along the African seaboard south of the Red Sea. Certain names have also been deciphered which have been referred to the distant region of the great equatorial lakes in our days again for the second or third time discovered by Speke, Grant, Baker and other explorers. According to Hartmann, the Funj type may be recognised in the clearest manner amongst the figures of Ethiopian captives.†

* Amelia B. Edwards, "Academy," March 21, 1885.

† "Zeitschrift für Ethnologie," vol. i., 1869.

THE NECROPOLIS OF THEBES.

The Thebes of the left bank was rather a city of the dead than of the living. Nevertheless the portion of the plain where the ground begins to rise towards the Libyan escarpments also abounds in monuments, mostly, however, of a sepulchral

Fig. 114.—RUINS OF THEBES : PROPTILON, OR NORTHERN GATE.



character. An eminence bearing the Arabic name of Medinet-Abu is covered with temples containing painted and sculptured historical pictures, on which are depicted with extraordinary accuracy the types and costumes of Hittites, Amorreans, Philistines, Teucerians, Danaans, Etruscans, Sardis, Ethiopians, Arabs, Libyans and

other conquered peoples. Once cleared of the accumulated refuse, the temple of Medinet-Abu, the "book of the conquests and triumphs of Ramses III., master of the sword on earth," will become the most complete, the most valuable and interesting of all the Egyptian sanctuaries.

Close by stands the almost Greek temple of Deir-el-Medineh, built by Ptolemy Philopator, and the Ramesseum with its triumphal gateway, adorned with four colossal decapitated figures. This is the edifice described by Diodorus under the name of the "tomb of Osymandias." In one of the temple courts lies the broken pink granite statue of Ramses II., formerly a monolithic block 55 feet high, weighing over one thousand tons, consequently heavier than the largest block in the temples of Baalbek, but at least a third less than the erratic boulder on which has been erected the equestrian statue of Peter the Great.

Between the Ramesseum and the temples of Medinet-Abu stood several colossal statues. Of these two only are still erect, those that became so famous in ancient times under the name of the statues of Memnon, but which in reality represent the Pharaoh Amenhotep II., seated in the hieratic attitude with his hands resting on his knees. Both are nearly 65 feet high with their pedestals, which, however, have sunk deep into the alluvial soil. The colossus which the Greeks and the Romans visited in crowds, and which they covered with writings in prose and verse, is the northernmost of the two. Its celebrity was due to the sound which it emitted, like that of the chord of a lyre when it breaks, and which, according to some authorities, began to vibrate in harmonious sighs as soon as the first rays of the sun dispersed the morning dew. But after Septimius Severus caused a fracture in the statue to be clumsily repaired, its voice was hushed for ever. No sound is any longer heard at dawn; but in the temple of Karnak there are some granite blocks which still emit sonorous vibrations when lit up by the morning sun.

North and west of the Ramesseum and of the temple of Seti which crowns the Karnak eminence are situated the rocks and ravines honeycombed with underground structures. Above the plain rises a hill of pyramidal form, shaped by the hand of nature into vast parallel flights of steps. According to some writers this characteristic form served as the model for the artificial pyramids raised over the royal tombs. Thus was realised at Memphis, as well as at Thebes, the formula of the ritual pronounced by the god of the lower regions: "I have set apart a dwelling unto thee in the mountain by the west."

The winding gorge ramifying amid these cliffs bears the name of Biban-el-Moluk, that is, "Gates of the Kings." It presents an imposing aspect with its bare rocky sides scored by vertical fissures, giving access to the royal tombs. Towards the extremity of the gorge is situated the sepulchral cave of Seti I., discovered by Belzoni in 1818, and remarkable especially for its painted bas-reliefs, one of which represents the "four races of the world"—Retu, Amu, Nahesu, and Tamahu, that is to say, the Egyptians, Asiatics, Negroes, and Libyans—marching in solemn procession at the obsequies of Seti.

At the opening of the gorges between the Kurnah and Assassif hills, Mariette

discovered in 1859 the mummy of a certain Queen Aahhotep, probably the mother of King Ahmes or Amosis. The ornaments of this queen, now preserved in the Bulaq museum, near Cairo, are of such marvellous workmanship that modern jewellers confess their inability even to imitate them. It seems probable that from another tomb in the Assassif hill also comes the Ebers papyrus, the "hermetic" book containing the pharmacopœia of the Egyptians at the time of the Thotmes dynasty.

West of the chief eminence, and not far from the Sheikh Abd-el-Kurnah, another hill pierced with galleries like a rabbit-burrow, a series of terraces is

Fig. 115.—ENTRANCE TO THE VALLEY OF THE ROYAL TOMBS.



occupied by the Deir-el-Bahâri, an obituary chapel, which in later times was probably used as a Christian church. On its ruined walls Mariette brought to light some most interesting sculptures, representing diverse historical objects, amongst others the naval expedition sent by the Queen-Regent Hatshopsitu to the land of Punt, that is, either to South Arabia or the present Somaliland. In another tomb, known as the Rekhmara, are also depicted ethnographic scenes relating to the same land of Punt. A neighbouring grotto, for which Maspero and Brugsch had long been searching, has yielded a whole series of royal mummies, amongst which are those of Ahmes I., of Thotmes II., conqueror of Asia Minor, of Ramses II., the legendary Sesostris of the Greeks, of Seti I., builder of the marvellous hypostyle chamber.



COLOSSAL STATUES OF THE RAMESSEUM AT THEBES.

Ph. Benard

The subterranean structures of Thebes have altogether supplied whole collections, which now form the pride of the various European museums. From the crest of the surrounding hills and heaps of refuse, a magnificent panoramic view is afforded of the groups of stupendous monuments in everlasting stone, raised by the Setis and Ramses on the opposite side of the river.

KUBTI—KENEH.

The great bend described by the Nile in an easterly direction below Thebes, and the wide breaches in the Arabian range at this point affording easy access to the Red Sea, could not fail to confer paramount commercial importance on this section of the valley. But the site of its central emporium has frequently been shifted, each city, ruined by wars or even razed to the ground by conquering hosts, still springing up again at some distance from its predecessor. In this region *Kubti*, the *Coptos* of the Greeks, and now the obscure village of *Guft* or *Koft*, was the oldest trading-place, dating from the eleventh dynasty, some five thousand years ago. As a royal residence it was for a time the rival of Thebes itself, and down to the massacre of the Christians which took place in the reign of Diocletian, it continued to flourish as the entrepôt of the produce imported into Egypt by the Red Sea and the port of Berenice.

In the year 1883, while exploring a temple of Isis, Maspero discovered at Coptos two black basalt square blocks, bearing the fragments of a remarkable inscription, which had reference to the construction by the Roman legionaries of some wells or cisterns on the routes from Coptos to Berenice and Myos Hormos. Coptos was succeeded as an emporium by *Kus* or *Gus*, the *Apollinaris Parva* of the Romans, which stood some 5 or 6 miles farther down on the same right bank of the river. During the time of the Caliphs and Mameluk sultans, Kus became the most flourishing place in Upper Egypt. It is now replaced by *Keneh*, the *Kainopolis*, or "New Town," of the Greeks, as the chief mart for the transit trade between the Nile Valley and the Red Sea. Keneh is the capital of a province, and the centre of a large pottery industry, supplying Lower Egypt with vast quantities of the finest earthenware produced in the country. These objects are made by mixing the ashes of alfa grass with the soft clay washed down from the Arabian range by the Wady-Keneh when suddenly flushed by the rare tropical downpours of this region.

KOSSEIR.

The opening of the Suez Canal, and the consequent displacement of the commercial centres, has greatly diminished the importance of Keneh as the entrepôt of the traffic between the Nile and Red Sea. Owing to the same causes the seaport of *Kosseir*, the outpost of this trade and the place where the pilgrims embark for Mecca, has also recently lost much of its activity and population. Nevertheless the caravans still find their way across the desert between these two points, and we still hear of the projected railway, some 120 miles long, which it is

proposed to construct along the old route from Keneh to Kosseir, which might thus again become one of the chief commercial outports of the Nile Valley. Here the large steamers plying on the Red Sea might ship goods, thereby saving the heavy transit dues across nearly the whole of Egypt to Alexandria. In 1862 an alternative but longer line was proposed by the English, running from Keneh to the ancient port of Berenice, and mainly following the old Roman route. Were this

Fig. 116.—KOSSEIR.

Scale 1 : 110,000.



railway constructed, sailing vessels would be enabled to avoid the tedious and dangerous navigation in the northern waters of the Red Sea.

The present town of Kosseir stands on an almost flat beach, in front of which the shipping is obliged to anchor in an exposed roadstead. But the smaller Arab craft find a shelter close inland, where they are protected by a coral reef from the north and north-east winds. The dilapidated fort commanding the town was built by the French during the Egyptian expedition under Bonaparte. Kosseir is badly supplied with wells, which explains its scanty vegetation. The only really fresh water comes all the way from the Nile; but most of the inhabitants are fain

to be satisfied with a slightly sulphureous liquid, which has to be sought over a day's journey in the desert. The hills and plains of the surrounding district are almost destitute of verdure, and all along the coast little is to be seen except sands and the coral reefs that have been slowly upheaved above the present sea-level.

Old Kosseir, lying over 3 miles to the north-west, is no longer accessible to shipping. The *sheb*, or labyrinth of coralline rocks developed in front of the beach, has rendered the entrance of the harbour so narrow that pilots no longer venture to risk the passage. Either Kosseir, or possibly some point farther north on Abu-Somer Bay, marks the site of the ancient *Myos Hormos*, which during the Roman period was one of the most frequented ports on the Red Sea. Numerous tombs, inscriptions, and other remains of antiquity are found in the neighbourhood of the town and round about the wells along the routes across the Arabian desert. Rich sulphur beds were till recently worked at a place farther north near the headland of Ras-el-Gimsah, which faces the Ras Mohammed at the southern extremity of the peninsula of Sinai.

DENDERAH.

On the left bank of the Nile over against Keneh the verdant plains of *Denderah*, the *Tentyris* of the Greeks, afford a pleasant relief to the heaps of yellow refuse and the triple enclosure of the triple temple still marking the site of this ancient city. The inhabitants of this place were famous in former times for their skill in capturing and charming the crocodiles, which they used as mounts. At present there are no longer any crocodiles in this part of the Nile.

The great temple of Denderah, built on the foundations of older monuments, is of comparatively recent date, as appears from the medallions of Cleopatra and the Roman emperors down to Antoninus Pius. Nevertheless in its disposition and ornamentation it reproduces the more ancient sanctuaries, although evidently under the influence of Hellenic art. Hathor, the tutelar divinity of Denderah, was a very different being as understood by the Alexandrian platonists from the same goddess as worshipped in the time of the Pharaohs. The temple of Hathor, which is in a good state of repair, is one of the richest in documents of a religious character, ceremonial programmes, geographical tables of cities and provinces, texts of prayers and incantations, calendars of feasts, medical recipes, lists of drugs, and so forth. At Denderah was found the precious zodiac, since transferred to the National Library of Paris. Mariette has devoted a large work solely to a description of this temple, a very "Talmud in stone," which he himself contributed to decipher, and many a page of which he discovered.* Taken as a whole this monument unfolds in all its details a picture of the ancient ritual, revealing in succession all the ceremonies from chamber to chamber, until we reach the "holy of holies," where the king alone penetrating found himself face to face with the deity.

"The portico of the temple is about 135 feet in width, and is architecturally

* "Denderah, description générale du grand temple de cette ville."

one of the richest and most beautiful structures of its class. It is supported by twenty-four columns, four deep, nearly 50 feet in height, and having a diameter of more than 7 feet at the thickest part. The capitals have sculptured on each of their four sides a full face of Athor, crowned by a small shrine or temple. The sculptures, which are of less merit than the architecture, represent offerings made by some of the early Cæsars; and on the ceiling are various mystical subjects, probably of an astronomical import, and the famous quadrangular zodiac, which is still in its original position.

"Passing through the back wall of the portico (which was at one time the front wall of the temple), the visitor enters a hall supported by three columns on each side, with cup-shaped capitals beneath those formed by the temple-crowned faces of Athor; and then proceeding right onwards through two similar halls, he reaches the sanctuary, which is isolated by a passage running all round.

"On each side of the temple are many small apartments, and two entrance-ways from the exterior, as well as singular inclined passages in the walls, two of which are entered from the sides of the portico. All the chambers and passages, except the two last mentioned, are profusely covered with sculptures and inscriptions of a religious character, chiefly depicting and narrating the piety of the sovereigns by whom the temple was erected. The royal names have not always been filled in; but, where they have been sculptured, they are generally those of the last Cleopatra and Cæsarion, her son by Julius Cæsar.

"A staircase on the left-hand side of the second chamber behind the portico conducts to the roof of the temple. Here are a sort of chapel and some small chambers, one of which is very interesting, because its sculptures relate to the story of Osiris. The exterior of the temple is as completely covered with sculptures as the interior. Among the figures there represented are those of Cleopatra and Cæsarion; but they cannot be supposed to bear any resemblance, since they belong not alone to a conventional art, but also to its lowest period.

"There are two smaller temples within the same inclosure as the great temple of Athor, one dedicated to Isis in the thirty-first year of Augustus, and the other usually known as the *Typhonium*, from the representations of Typhon on the capitals of its columns, but probably connected with the worship of Athor." *

THINIS—GIRGEH.

In the broader part of the Nile Valley, below Denderah, the two hamlets of *Harabât-el-Madfunch*, that is, "Harabât the Buried," and *El-Khargeh*, still mark the site of *Abydos*. Till recently these ruins had been identified with the ancient *This* (*Thinis*), which at one time eclipsed the fame of Thebes and Memphis themselves. But according to Mariette the remains of this venerable place should be sought lower down, either at *Girgeh* itself or in its immediate vicinity, and in any case it is now certain that *This* and *Abydos* were two different places. At *This* was born Mena, or Menes, the reputed founder of the Egyptian monarchy. Here

* "Encyclopædia Britannica," ninth edition, art. Denderah.

also, according to the legend, the body of Osiris, since transported to Philæ, had been buried hundreds of thousands of years before that event. In other words, to this hallowed spot tradition pointed as the cradle of the autochthonous people, from whose independently developed civilisation is mainly derived our modern culture, through the intermediate channel of the Hellenes.

All traces have vanished of the temple whither pilgrims were attracted from all parts, just as those of the Christian world still direct their footsteps towards the

Fig. 117.—ABYDOS: BAS-RELIEF IN THE TEMPLE OF SETI I., REPRESENTING A SCENE OF ADORATION.



Holy Sepulchre of Jerusalem. But the nitrous sands of the district have revealed a large number of tombs here built by Egyptian devotees anxious to repose by the side of their national deity. According to Maspero far more than half of all the sepulchral stones preserved in the European museums come from Abydos. A group of tombs large enough to have assumed the appearance of a volcanic mound is known by the name of Kôm-es-Sultan, or "King's Mount." The explorations here being made continually reveal tombs of older and older date, the farther the

search is prosecuted. Hence some hope has been expressed that sooner or later the excavators may light upon the very entrance of the crypt that led to the shrine of the god himself.

To the original sanctuary has succeeded a monument which, however posterior to the temple of Osiris, is still none the less one of the most venerable in Egypt. This is the so-called Memnonium, here erected by Seti I. thirty-three centuries ago, in order to transmit his glory to future generations, but which his son, Ramses II., turned to far more account to perpetuate the memory of his own exploits. Geographical lists have been sculptured on the basement of this temple of Seti I., and the British Museum possesses a "table of Abydos," a mutilated list of kings from the temple of Ramses II. But a new "table of Abydos," containing the complete list of the seventy-six kings from Menes to Seti, has been brought to light by the researches of Mariette.

Below Abydos the older monuments of Egyptian culture have for the most part disappeared. Here nothing is met except towns and villages, which, if not absolutely modern, no longer contain any important remains of ancient times. *Girgeh* or *Gerga*, capital of a province, stands on the west side of the stream, which being here abruptly deflected from the opposite side, has eroded the left bank, carrying away half of the town, with its mosques and minarets. A little lower down, *Sohag* and the industrious town of *Akhmin*, the ancient *Chemno* and the Panopolis of the Greeks, face each other on either side of the river. Then follow on the western plain, *Tahta* and *Abutig*, near which is a gorge still visited by pilgrims, who here assemble to worship the sacred serpent as of old. In this part of Upper Egypt the Coptic language survived for some time after it had become extinct elsewhere in the Nile Valley.

SIUT.

Farther on near the same bank, but more inland, are seen the picturesque outlines of a large town, which under the slightly modified form of *Siut* or *Assiut* has preserved its ancient name of *Saut*. This is the *Lycopolis*, or "wolf town," of the Greeks, so named because it was dedicated to the god Anubis. Platinus was a native of Siut, which as the capital of all Upper Egypt is a place of some trade and industry. Here are made a peculiar kind of black, white, and red earthenware, and pipes so highly prized that they are even exported to foreign countries. The bazaar is well stocked with the produce of Dar-Fôr and the surrounding oases, which finds an outlet through the neighbouring riverain port of *Hamrah*. Till recently the Coptic monks of the adjacent village of Zawiet-el-Deir carried on under special privilege the nefarious trade in the mutilation of children, who were afterwards sold as guardians of the Egyptian harems. Other Copts are more worthily employed in the weaving of linen fabrics, which have become one of the specialities of the industries of Upper Egypt.

THE GREAT AND LITTLE OASES.

Siut, more than any other Egyptian town, maintains direct relations with the oases, which are developed in a vast crescent parallel with the bend of the Nile, sweeping round from the south to the west and north-west. The "Great" or "Southern" Oasis, known also as that of Khargeh, although the largest, is no longer the most populous, but still enjoys some importance as a station for the caravans from Dar-Fôr. Its capital, whose site has never been shifted throughout historic times, has preserved a temple of Ammon built during the reign of Darius,

Fig. 118.—RED POTTERY OF SIUT.



"Son of Isis and Osiris." An avenue of pylons leads to the sanctuary, whose bas-reliefs present an extraordinary variety of historical and other figures. In this respect the temple of Darius is altogether unique.*

All the surrounding cliffs are pierced with sepulchral chambers, in which Christian tombs are very numerous. The oasis of Beris, more to the south, has also preserved an Egyptian temple dating from the Roman period. Round about the present oasis are scattered many ruins, showing that the cultivated lands formerly covered a far greater extent than is now the case. All these tracts might be reclaimed by clearing out the choked-up wells, and draining the soil where the water used in irrigating the rice-fields in some places forms unhealthy

* Hoskins' "Visit to the Great Oasis of the Libyan Desert."

marshes. The inhabitants, of somewhat darker complexion than the Egyptians, due probably to a mixture of Negro blood, for the most part present a cadaverous look. They are also very poor, being often obliged to pay the taxes in kind with palm-leaf baskets and suchlike articles.

Within the *Kasr* of Khargeh the buildings are crowded one on the other, and the network of narrow lanes runs underground through vaulted galleries. At rare intervals an aperture like that of a well gives access to a dazzling ray of light, relieving the gloom of these dark passages. Such is the style of building prevalent throughout all the towns of Siwah, as well as in many other towns in the oases, and the same arrangement occurs even in Nubia.

The Wah-el-Gharbieh, or "Western Oasis," better known as that of Dakhel, or Dakhleh, that is, the "Interior," is by far the most densely peopled, although scarcely mentioned by the ancient writers. Like Khargeh, it has its temple of

Fig. 119.—OASES OF KHARGEH AND DAKHEL.

Scale 1 : 2,200,000.



Jupiter Ammon, which is situated in the neighbourhood of the capital known by the name of El-Kasr, or "The Castle." This is probably the sanctuary that Cambyes intended to visit during the expedition to the south which ended so disastrously. The population consists of fellahin with the same usages and engaged in the same pursuits as those of the Nile Valley, but far more crowded together. Every foot of available land is carefully cultivated, and the date groves, tended with almost filial devotion, yield abundant supplies of delicious fruit.

Although described as a "detached fragment of Egypt," the Dakhel oasis nevertheless differs from it in its vegetation. Here are found plantations of olives, lemons, and oranges interspersed among the palm groves, and producing the finest fruits of the oases. The inhabitants of Dakhel have a few horses, but they have failed to breed camels, in consequence of a poisonous fly that infests the district during the summer, and whose bite is fatal to this animal. To the want of camels

is mainly attributed the profound ignorance of the natives respecting the wilderness stretching westwards. For them the sandy shores of their islet are like those of the trackless ocean on which no sail is seen.

The small oasis of Farafreh lies exactly under the same parallel as Siut, but 180 miles in a straight line to the west. It is of little importance, and all of its few hundred inhabitants might easily find a refuge within the enclosure of the Kasr, which commands the chief hamlet. It has been only twice visited by European explorers, Cailliaud in 1819 and Rohlfs with his companions in 1874. Nor is Farafreh very well disposed towards the "Infidel," thanks to the brother-

Fig. 120.—UNDERGROUND PASSAGE AT MEHENDI, NEAR MAHARRAKA, NUBIA.



hood of the Senusi, who have here found a large number of adherents. These Mohammedan missionaries, who arrived poor, are now the largest proprietors in the oasis. They have in fact reduced the whole population to a state of serfdom, in return for their enforced labour teaching them a few verses from the Koran. In this way all the children have learnt to read and write.

The Bakharieh Oasis, lying nearer to the Nile Valley and being better supplied with springs than Farafreh, is also far more densely peopled. This is probably the "Little Oasis" of the ancients, and here are still to be seen a few monuments dating from the Roman period, including a noble triumphal arch, some underground aqueducts and fortifications.

SIWAH—GARA.

The oases farther removed from the Nile and forming a physical dependence of Cyrenaica rather than of the fluvial region, constitute the Siwah group, famous in ancient times for the oracle of Ammon, which, according to Herodotus, was of equal antiquity with that of Dodona. *Siwah* and *Agermi*, the two chief towns in the oasis, are built of nummulitic limestone and blocks of impure rock salt, each on the slope of a rocky hill. Their outer walls and terraces are so disposed as to form irregular fortresses of extremely picturesque appearance. That of Siwah, approached by no less than fifteen gates, has a circumference of not more than 1,260 feet, and its ramparts are surmounted by high, square, and round towers, all

Fig. 121.—THE SIWAH OASIS.

Scale 1 : 336,000.



of different form. These towers are in reality so many houses piled up close together, and built over a labyrinth of subterranean galleries. The town thus grows in height before its base is broadened out.

The temple of Jupiter Ammon, whither the Macedonian conqueror went to have himself oracularly proclaimed master of the world, is still standing near Agermi, and within half a mile are visible the ruins of another sanctuary amid the surrounding palm-trees. The hieroglyphics on this building have not yet been deciphered. The Jebel-el-Mutah, one of the isolated crags in the Siwah depression, is honeycombed in all directions by the galleries of a necropolis.

Dates are the staple commodity of Siwah. M. Jourdan made an attempt to calculate the produce of the date groves in this oasis, taking as a standard of measurement the cube of the fruit accumulated for the expedition on the market-

place near the great caravanseraï. According to this rough estimate the one hundred thousand palms of Siwah might supply three million kilogrammes of dates, and those of Agermi much about the same quantity. This is exclusive of the public plantations, which yield fruit of an inferior quality, supplying fodder for the animals.

The salt of Siwah, which is of a superior quality, was formerly reserved for certain religious ceremonies, and was exported as far as Persia for the use of the royal household. The inhabitants of Siwah, who are of indolent habits, seek no foreign markets for all these commodities, or for the tobacco smuggled into the oasis from the coast of Cyrenaica. Of disagreeable appearance, and probably of very mixed origin, they betray no resemblance to the fellahin, but are as emaciated and fever-stricken in appearance as the natives of El-Khargeh. Their language is of Berber origin, although most of them understand and even speak a little Arabic. They are excessively jealous, and oblige all the unmarried adult males, whether bachelors or widowers, to dwell together outside the town in a sort of fortress, where they remain shut up during the night. Newly married people remove at once to the town, a sort of common tribal harem, where the husband's kindred assign them the upper story of their pyramidal houses. In these dwellings the generations are thus distributed on an ascending scale from the ground-floor upwards.

The village of *Gara*, in the oasis of like name, presents like Siwah the aspect of a feudal stronghold.

The inhabitants of Siwah and Gara are still very fanatical, although less so than those of the oasis of Faredgha, which lies farther west in the direction of the Gulf of Cabes. Here on the slopes of the plateau skirting the depression on the north, is situated the parent house of the Senusi brotherhood. *Jarabûb* or Jerkbûb, as this place is variously called, was founded in the year 1860, as the residence of Sidi Mohammed el-Mahdi, the grand-master of the Senusi. A small arsenal and a small-arms factory are attached to this monastery, the inmates of which, mostly immigrants from Algeria, Morocco, and other distant Mohammedan countries, appear to have numbered about 750 in the year 1883. According to Godfrey Roth, the Mahdi of Faredgha is the "benefactor of the Bedouins." To him is due the establishment in the Sahara of over fifty stations where caravans can obtain water and provisions.

ASHMUNEIN—ANTINOË.

From Siut to Cairo all the towns, connected together by the Nile Valley railway, follow along the left bank of the river, the only side skirted by a broad zone of land under cultivation. Beyond *Manfalut* begins the Ibrahimieh Canal, which derives its supply from the Bahr-Yusef. Here the plains are intersected in all directions by channels and irrigation rills. This fertile region of Egypt was formerly covered with several large towns. At the foot of the Arabian range lies the great necropolis of *Tell-el-Amarna*, where all the dead were placed under the protection of the Semitic god Aten (Adon, Adonai), the "radiant orb."

Ashmunein, near the station and large sugar factory of *Roda*, occupies the site

of *Khmunu*, which the Greeks and Romans called *Hermopolis Magna*, and whose necropolis, excavated in the Libyan hills, contains large numbers of mummified ibises and cynocephals.

Farther east on the right bank, over against the town of *Mallaueh-el-Arish*, the palm groves surrounding *Sheikh-Abadeh* are strewn with ruins, the remains of the ancient *Antinoe*, founded by Hadrian in honour of Antinous. Numerous monuments of this Roman city, notably some superb Doric and Corinthian colonnades, were still standing down to the middle of the present century. But they have since been destroyed to supply lime and building materials for the modern buildings in the district. This part of the Arabian range also contains a vast number of sepulchral chambers.

North of Sheikh-Abadeh the cliffs conceal other grottoes, some of which are nearly five thousand years old. These subterranean buildings which take the name of *Beni-Hassan*, from a neighbouring village, comprise the most interesting tombs in all Egypt, precisely because they are not consecrated to kings and high officials of the royal courts. The pictures on the walls have less conventional pomp, and represent fewer funeral rites and mystic ceremonies; but they introduce us to the very life of the people: its struggles, its pursuits of all kinds, its family circles; its sports and games, such as pitch and toss, tennis, hot cockles, and even cricket. The painted bas-reliefs of these tombs reveal to us the Egyptians of the olden times, such as they were in war, on their farms, in the workshop, in their hours of relaxation and repose. Here are revealed all the secrets of their crafts, and the very tricks of their jugglers and mountebanks.

MINIEH—ABU-GIRG.

Minieh, or *Miniet*, which has replaced the ancient *Munat-Khufu*, or "Nurse of Cheops," is a provincial capital, and still one of the great cities of Egypt. It has preserved no remains of its ancient monuments; but a large market is held under its wide-spreading sycamores, and its sugar factory is one of the most active in the country. On a cliff near Minieh stands the famous *Deir-el-Bakara*, or "Convent of the Pulley," so called from a pulley-rope by which its Coptic monks let themselves down to the river, and swim out to ask bakshish of every passing vessel.

In the interior of the Arabian desert, but much nearer to the Red Sea than the Nile, are situated two other convents of the "Lower Thebais," Saint Anthony and Saint Paul, the first of which, with a community of about fifty monks, is the oldest Christian monastery not only in Egypt, but in the whole world. Both possess shady gardens enclosed within the convent walls.

The town of *Abu-Girg*, standing near the Nile and on the railway, has supplanted in commercial importance its former rival *Behnesch*, which lies more to the north-west on the Bahr-Yusef amid the ruins of the ancient *Pamsjat*, the Oxyrrhinchos of the Greeks. Then follow farther down the valley *Maghaga*, *Feshn*, and *Beni-Suef*, the last-named capital of a province and a trading-place, where some cloth-mills are kept going. From time immemorial this has also been the chief

centre for those hatching ovens, or artificial hatchers, which have for ages constituted one of the special industries of Egypt. Beni-Suef has succeeded the ancient *Heracleopolis*, which was a royal residence during the ninth and tenth dynasties, and the ruins of which lie farther west, scattered round the modern village of Ahnas-el-Medineh. Travellers intending to visit the Fayum depression generally leave the main route at Beni-Suef or some of the neighbouring stations nearer to Cairo, and take the routes leading westwards. From *El-Wasta* they reach the province directly by a branch line; but from the two southern stations the Fayum is approached through the opening followed by the Bahr-Yusef Canal, which was formerly lined by monuments dating from the epoch of the Pharaohs. .

EL-LAHUN—ARSINOË.

At the very entrance of the gorge, near the village of *El-Lahun* (*Illahun*), which has preserved its ancient Egyptian name of Lo-Hun, or "Mouth of the Canal," are seen the remains of the dam and sluices by which the waters of Lake Mæris were regulated. Farther on stands a pyramid, now a shapeless mound, which is supposed to have been erected by Amenemha III., under whose reign the vast lacustrine reservoir was excavated. Another pyramid, called by the name of Howara, about 100 feet high, occupies a site beyond the gorge within the circular basin of the Fayum, the ancient "country of the sea." Formed of a rocky nucleus, round which have been built layers of bricks made of the Nile mud, this structure presents somewhat the appearance of a natural hillock; but it is in a good state of repair, compared at least with the building which Lepsius supposed must have been the famous "Labyrinth, which comprised two stories of fifteen hundred chambers each, where the visitor became entangled in endless passages."

Of the sumptuous group of buildings forming the Loparohun, or "Temple of the Canal Mouth," if it really stood on this spot, nothing now remains except heaps of rubbish, crumbling brick walls, vestiges of gateways, and some choice fragments of sculpture in granite and limestone. Here has also been discovered the head of a royal sphinx, resembling those of Sîn, a proof that the Hyksos must have penetrated into this part of Egypt. A papyrus preserved in the museum at Bulaq contains a minute description of the ancient edifice, and serves as a "guide-book" to the archæologists, who are endeavouring to restore the original plan.

The flooded basin of Lake Mæris, over four miles broad, and enclosed by embankments which can here and there still be traced, formerly separated the Labyrinth from *Pa-sebak*, one of the great cities of Egypt. This "City of the Crocodile," as its name indicates, was the *Arsinoë* of the epoch of the Ptolemies, when it still covered a vast extent of ground. The remains of walls, a broken obelisk, and other débris, show that it stretched for at least five miles in the direction from north to south. In some of the neighbouring tombs have been discovered several papyrus manuscripts of the highest interest, written in various languages—Egyptian, Hebrew, and even Pehlvi, or old Persian. The Greek documents have furnished variant readings of the text of Thucydides, Aristotle, and the Gospels.

MEDINET-EL-FAYUM—KASR-KERUN.

Medinet-el-Fayum, the modern capital, which was a country residence of the Mameluk dynasty, is one of the most animated and original as well as one of the pleasantest places in Egypt. The gardens yield in abundance fruits and flowers, amongst others those lovely roses which are at once the glory and the chief wealth of the Fayum, being used by the Copts in the preparation of costly essences.

North of Medinet stands *Senhures*, also an important town. The surrounding plains of the lacustrine basin, fabled to have been originally conquered from Typhon—that is, reclaimed from the wilderness through the beneficent influence of Osiris, tutelar deity of the Nile waters—yield rich crops of wheat, cotton, maize, sugar. The sugar factories of this district are connected by numerous branches with the main railway system. But the cultivation of some plants has had to be abandoned, owing to the increasing saline character of the soil, insufficiently saturated by the irrigating waters. The vineyards, which during the seventeenth century were cultivated in the neighbourhood of seven different villages, have entirely disappeared.

Near the northern extremity of the Birket-el-Kerun, the “Lake of Ages” or of “the Horns,” as it is variously interpreted, where are collected the superfluous waters from the irrigation canals, are seen the ruins of a temple bearing the name of *Kasr-Kerun*, or “Horn Castle,” which is supposed to occupy the site of the ancient *Dionysias*. South of the lake the plain stretches away in the direction of the Wady-Reyan, some parts of which, separated by a rising ground from the “Lake of Ages,” lie some 270 feet below the entrance of the Bahr-Yusef at El-Lahun. It was in this depression that Cope Whitehouse expected to find the great reservoir of Lake Mæris!

MEIDUM—SAQQARAH.

Almost immediately to the north of the entrance to the Fayum stands the remarkable pyramid of Meidum, with which begins the long line of monuments of this type terminating northwards beyond Memphis. The sloping walls of the Meidum, which terminated in two retreating stories, spring from the midst of a pile of refuse encircled by a number of tombs. This curious monument, whose present height exceeds 200 feet, is known to the natives as the “False Pyramid;” but its antiquity is much less than was till recently supposed. According to Maspero, by whom it has been opened, it dates only from the eleventh or even the twelfth dynasty.

Farther on the village of *Matanieh* is overshadowed by two other pyramids, one of which is of the classical type, while the other, more inclined towards the summit than in the lower section, presents the appearance of an enormous prism. Then follow in the neighbourhood of the Nile the four so-called pyramids of Dashur, one of which attains a height of 330 feet. This ranks as the third in height of all the Egyptian pyramids, and has preserved its original facing of

polished stone better than any other. The seventeen similar structures which are disposed in a line along the foot of the Libyan escarpment above the village of *Saqqarah*, are all surpassed in elevation by the famous three-storied pyramid, regarded by most Egyptologists as the most ancient of all. Its very form, modelled on the outlines of numerous crags in the Libyan range, appears to have been the primitive type of all these monuments. According to Mariette, it dates from the first dynasty, and must consequently be at least sixty-five centuries old.

Several of the recently opened Saqqarah pyramids have been thoroughly explored, and were found to contain the tombs of some of the sovereigns of the sixth dynasty. Square structures in the form of huge sepulchral blocks, standing

Fig. 122.—PYRAMID OF MEIDUM.



on the skirt of the Libyan cliffs, are the so-called *mastaba*, which are built over the chambers of the dead here excavated in the live rock. The largest of these sepulchral buildings, known to the Arabs by the name of *Mastaba-el-Faraun*, is traditionally said to have been the seat from the summit of which the early Egyptian monarchs proclaimed their will to the people. But the explorations carried out on the spot have shown that it was the tomb of *Unas*, a high official of the fifth dynasty. The tombs of this vast necropolis are divided into square groups by streets running at right angles; and Maspero suggests that the pyramids were also disposed in some similar symmetrical order. Those of the first dynasties are situated in the extreme north, those of the twelfth in the Fayum; while between

these two groups archæologists may expect to come upon the royal tombs of the sixth to the eleventh dynasty inclusive. Thus would be filled up the "great gap" indicated by Mariette in the sequence of the historical monuments of ancient Egypt.

MEMPHIS.

At the foot of the slopes crowned by the pyramids of Saqqarah, the inequalities of the soil conceal all that now remains of *Memphis*. The little village of *Badreshein* occupies the southern extremity, that of *Mit-Rahineh*, the central point of this region of ruins, a large portion of which is now overgrown with a forest of palms. The city, whose foundation is attributed to Menes, must have covered a vast space, judging at least from the remains of embankments here skirting the river, and the heaps of refuse strewn over the plain. But this great metropolis, while escaping the destroying hand of the conqueror, fell a surer prey to the inevitable vicissitudes of time. The foundation of Alexandria, followed by the rise of Cairo, "the victorious," on the right bank of the river, possessing geographical advantages fully equal to those of Memphis, rendered the existence of this place unnecessary. Its marbles and its granites were floated down to Alexandria; its less valuable materials were utilised by the builders of the neighbouring towns; what remained was distributed among the surrounding villages of the fellahin. Nothing survives but the name, perpetuated in that of the *Tell Mouf*, or "Hill of Memphis," and two colossal statues of Ramses II. in the immediate vicinity. The vast necropolis of Memphis, which covered an area of over a hundred square miles, has been a receptacle for many millions of human and animal mummies.

Many monuments doubtless lie buried beneath the sands borne by the west winds from the Libyan desert. Mariette, observing in the year 1850 the head of a granite sphinx, which had been exposed by a current of air, conceived the idea that here perhaps lay concealed the avenue of the Serapeum, described by Strabo. He accordingly at once set to work, and had the satisfaction of finding his anticipations verified. By sinking shafts to a depth of 65 feet at uniform distances over a space of about 220 yards, he came upon an avenue where one hundred and forty-one sphinxes were still *in situ*, and terminating with a semicircular row of statues representing the great men of Greece. Then to the left he reached an Egyptian temple built by Nectanebo, and farther on he discovered to the right the entrance of the vast underground chambers forming the tomb of Apis. Thus was confirmed the fact, anticipated by science but hitherto unproven, that the god Serapis, or Osor-Apis, was the bull Apis after his death, that is to say, the incarnation of Osiris. The works of excavation were not unattended by difficulties and even dangers, for even in the pursuit of knowledge the savant has sometimes to contend with jealous rivals; but the results were of vast importance.

The clearing out of the Serapeum brought to light no less than seven thousand monuments, the most valuable of which are now preserved in the Louvre and Bulaq Museum. A series of chronological inscriptions was also discovered, by

CAIRO AND ITS ENVIRONS.





means of which Mariette was able to determine with certainty the chronology of Egypt as far back as the year 980 of the old era.

The necropolises of Saqqarah have also furnished Mariette and other explorers with objects of the highest interest, amongst others the "Table of Saqqarah," containing a list of kings, and the statue of a scribe with eye of rock crystal and characteristic expression, now deposited in the Louvre. One of the tombs, that of Ti, described by M. de Rougé as the "marvel of Saqqarah," forms an exquisite idyl, with its series of charming scenes representing the landscapes, daily labours, and pleasures of rural life. One of the scenes bears a legend in these words, summing up the history of Ti: "When he toils man is full of sweetness, and such am I." *

THE GREAT PYRAMIDS.

The pyramids terminating northwards the long line of royal tombs are known as those of *Gizah*, from the village of that name, which stands on the right bank of the Nile over against Old Cairo. In these stupendous monuments the whole of Egypt is symbolised. The three enormous piles overshadowing the verdant plain and winding stream are the embodiment of the mental image conjured up by the very name of Egypt. Their triangular outlines, towering above the Libyan plateau, are even visible over a vast distance throughout the Nile Valley and plains of the delta. For hours together the wayfarer journeying onwards beholds them standing out against the horizon, apparently neither enlarged nor diminished in dimensions. They seem still to accompany him, moving mysteriously along above villages, trees, and cultivated lands. A nearer view reveals them filling up all the prospect in one direction; and the eye now follows with amazement the graded lines of the prodigious masses, showing in the light the profile of their rugged slopes, disposed in flights of fractured steps. They resemble mountains hewn into square blocks rather than structures raised by mortal hand, revealing as it were "the transition between the colossi of art and the giant works of nature." "All things fear time," says the Arab proverb; "but time fears the pyramids."

Doubtless these piles of stone have only the beauty of their geometrical lines, lacking all architectural display; but they overawe by their very mass, and still more by their antiquity: by the memory of the generations of man that, like the everlasting stream of the Nile, have flowed silently onwards at their feet. For however old in themselves, these monuments of human slavery attest the existence of a still older antecedent culture, marked by the slow evolution of science and the industries from their crude beginnings in the Nile Valley. In these gigantic structures geometry has discovered measurements of supreme accuracy, for here all has been measured and planned in due proportion. The very perfection of these proportions has suggested to many observers the idea of a deep symbolical meaning, and has even given birth to a sort of "religion of the pyramids," which

* "Mémoire sur les monuments des six premières dynasties."

has found adherents, especially in Scotland and the New World. By their proportions and dimensions the pyramids have thus come to be regarded as so many "Bibles in stone."

The Pyramid of Cheops, or Khufu, the largest of the three, is estimated to

Fig. 123.—ASCENT OF THE GREAT PYRAMID.



cover an area of over twelve acres, while its four triangular sides present altogether a surface of no less than twenty acres in extent. The quantity of materials required to be brought from great distances by the Nile, placed on their rocky

foundations, raised to a height of over 500 feet, and adjusted with the greatest care, was no less than 90,000,000 cubic feet, a quantity sufficient to build a wall seven feet high and twenty inches thick across the whole of Western Europe from Lisbon to Warsaw. The basilica of St. Peter's would disappear altogether, with its colonnades and cupola, in the interior of this prodigious polyhedron in stone. According to Herodotus, an inscription on the Great Pyramid estimated at 1,600 silver talents, or £400,000, the sum expended on the purchase of the garlic, onions, and parsley required to supply the workmen with these articles of food; and for the implements, machinery, quarrying, transport of materials, and so forth, who will estimate the enormous outlays that must have been incurred! But, above all, how many human lives must have been sacrificed on the works! According to a Greek tradition—which, however, according to Maspero, rests on no historic evidence—the people held in horror these monuments of their bondage and oppression. They were even said to have avoided uttering the very names of the kings in whose honour these mountains of stone had been raised.

While exceeding all other structures in bulk, the pyramids are surpassed in height by some of the minsters in the west of Europe. The Pyramid of Cheops, diminished by some forty feet through the loss of its stone facing and the subsidence of its foundations, has a present height of 456 feet;* that of Khephren, or Khefra, about six feet less; while the third, of Mycerinus, or Menkera, falls below one-half of these elevations. The other pyramids of the plateau, "mere embryos," so to say, can scarcely be distinguished from the heaps of refuse scattered at the base of the two larger piles. The last, proceeding northwards, is that of Abu-Roash.

Notwithstanding the statements often made to the contrary, the two great pyramids are easily scaled, even without the assistance of the Bedouins, who undertake for bakshish to look after the safety of travellers. In any case the labour expended on the ascent is amply compensated by the marvellous view commanded from the summit. From this altitude the eye sweeps over a boundless and varied prospect, where the red and yellow sands of the desert roll away in one direction like ocean billows, while in another the verdant plains with their dark groups of hamlets and silver lakelets left by the last overflow of the Nile and its canals stretch beyond the horizon. Travellers often ascend the Pyramid of Cheops before dawn in order to contemplate the morning sun suddenly lighting up these limitless spaces.

The great pyramids face the cardinal points so exactly that the Bedouins of the district perfectly understand how to use these monuments not only in discriminating the seasons, but also in calculating the time of day. At the equinox the rising sun seen in a line with the northern or southern face of the structure presents exactly half of its disc to the view. At the time of the French expedition, Coutelle, measuring the Pyramid of Cheops with the compass, calculated that its orientation was perfect. But this was not confirmed by the subsequent and more precise measurements of Nouet; while the minute observations of Flinders Petrie, continued for a period of several months, have placed it beyond doubt that the two parallel east and west sides, instead of pointing due north, are inclined 3' 40" to the

* Exact height from p'diment to apex, according to Flinders Petrie, 146·7 metres.

west.* To what cause is this deviation to be attributed? Is it to be regarded as the result of an error in the calculation, or has there been a change in the axis of the earth itself, which, instead of being fixed, as formerly supposed, has been gradually displaced so far to the west?

The blocks used in building the pyramids of Gizeh were drawn from the nummulitic formations of Torah and Masarah, which skirt the east bank of the Nile, and which still supply the materials required for the enlargement of Cairo since those obtained from the ruins of Memphis have been exhausted. According to the popular legend, the countless fossils in the stones forming the steps of the pyramids are the lentils left by the workmen engaged in erecting them. Formerly

Fig. 124.—THE SPHINX.



the nummulitic blocks were faced by a smooth limestone resembling marble. A portion of these facings even still survives towards the summit of the Pyramid of Khephren, but no trace remains of the hieroglyphics which at one time decorated the surface of these monuments.

The passages in the interior, so disposed as to lead treasure-seekers astray, and prevent them from penetrating to the sepulchral chambers, are faced in granite. After long subterranean explorations, archæologists have at last discovered the sarcophagi of the sovereigns for whom these vast burial-places were prepared. That of Khufu is still *in situ* in its vaulted chamber. The blocks of black granite

* Flinders Petrie, "The Pyramids and Temples of Gizeh."

with which it is faced are so exquisitely polished that by the light of the torches the visitor sees himself reflected as in a mirror. The tomb of Menkera, or Mycerinus, was excavated in the very rock which served as the original core or nucleus above which the pyramid was raised. But the sarcophagus which it contained was lost when the vessel transporting it to England foundered off the Portuguese coast.

In the angle formed in the north-west, between the two colossal monuments of Cheops and Khephren, the irregular and hilly plateau has been excavated in all directions by the tombs and burial-grounds where repose the subjects of the Pharaohs. To the south and east are other remains, wells, and sepulchres, while on the skirt of the plateau, encircled by dunes, is seen the famous sphinx, gigantic guardian of the pyramids. This prodigious statue, contemplating the plain with motionless eye, seems verily the "marvellous work of the gods," as recorded in an ancient inscription recently deciphered. It consists of a sandstone rock, to which chance had given the vague outlines of an animal figure, and the form of which was completed by the Egyptian architects. The spacious cavities were filled with rough stones disposed without art; but the surface consists of small and regular layers carefully cut and sculptured, so as to produce the very muscles of the animal, which represents the god Har-em-Khu, that is to say, "Horus in the bright sun," or "Horus of the two horizons."

An inscription discovered by Mariette attributes to Cheops the "restoration" of this monument, on which the natives have conferred the titles of "Father of Fear," and "Lion of the Night." The chamber or rooms said to have been seen by Vansleb and other explorers in the back of the sphinx cannot now be traced. But to the south-west, in the immediate vicinity of the colossus, Mariette brought to light from beneath the sands an underground temple, with enormous pink granite and alabaster walls, faced with the largest limestone blocks hitherto discovered. This building, destitute of all ornament, seems to date from a period of transition between the early megalithic monuments and edifices properly so called.

The statue of Khephren found in this temple, and now preserved in the Bulaq Museum, is perhaps the finest known work of Egyptian statuary. At that period of the national art inflexible forms and conventional types had not yet been imposed by the hieratic laws on the native sculptors. The statue had been hidden, or perhaps thrown into a well, after the erection of the temple.

CAIRO.

Cairo, the heir of Memphis, occupies a situation analogous to that of the old metropolis of Lower Egypt. This "diamond clasp" closing the "fan of the delta," stands like Memphis at the apex of the triangle of alluvial lands formed by the main branches of the river, and consequently occupies the natural converging point of all the routes across Lower Egypt, between Alexandria and El Arish. But although lying near the bifurcation of the Nile, its site has been displaced towards the north with the channel of the river itself. Were it removed to the

left bank of the Nile, Cairo would form a simple northern extension of Memphis. It would even seem more natural that the capital, like nearly all the other cities of Middle Egypt, should stand on the west side, which comprises over three-fourths of the arable lands, and which gives more easy access to Alexandria, the chief out-port of the country. But Cairo is not an Egyptian foundation. It was built by Asiatic conquerors, who naturally could not think of founding their chief stronghold on the wrong side of the river for them. Thus the very position of Cairo on the right bank of the Nile suffices to show that Egypt is a conquered land.

The name of El-Kahirah, or the Victorious, officially given to the capital of Egypt, is not current amongst the people themselves. *Masr*, the old name of the whole country, to which is often added the epithet of "Mother of the World," is the expression more usually employed in speaking of the city. Nothing but a small fort bearing the name of Babelun (Babylonia) occupied a site a little above the present capital down to the nineteenth year of the Hegira, when it was captured by Amru. After this event it began to extend northwards by the addition of the El-Fostât, or "Tent," which afterwards became the Masr el-Atikah, or "Old Cairo." Again besieged and reduced, over three centuries afterwards, it continued still to expand in the same direction by absorbing a third quarter, the so-called military encampment of El-Kaireh. Here was developed the modern city, whose name has been slightly modified to Cairo and other forms in the European idioms.

Towards the north-west the right bank of the Nile is skirted by the wretched hovels of *Bulaq*, a large and industrial suburb now connected with the city by a new avenue lined with buildings. The old walls have been in great part destroyed or overlapped by new structures; but they are still standing towards the east and south, half buried amid heaps of refuse. The cliffs of the Jebel-Mokattam extend to the south-east angle of the city, where their advanced spurs are crowned with the citadel, which was occupied by the British forces in 1883, immediately after the battle of Tel-el-Kebir. From this eminence, flanked by sustaining walls and ramparts, a view is commanded of the whole city, with its cupolas and minarets, its party-coloured buildings, its groves and gardens. Round this city of bright colours and throbbing life, stretches the grey and silent plain overlooked from a distance by the pyramids.

Cairo had been built on the bank of the Nile; but since the tenth century the stream has been displaced, and until recently the city was separated from the river by a belt of groves and gardens, nearly two miles broad in some places. It is, however, traversed in its entire length by the narrow Khalig Canal, which runs dry for a part of the year. The Ismailieh Canal, another and broader channel, deep enough to remain flooded throughout the year, runs north-west of the city in the direction of Suez, through the Wady-Tumilât. The Nile, 1,320 feet wide between its embankments, is here crossed by a modern iron bridge resting on stone foundations, and continued westwards by a long viaduct across a branch flooded during the inundations. But for the palms fringing the left bank, the dahabiyeh and other craft moored along the quays, one might almost fancy at the sight of this bridge that he was surveying the outlying quarters of some European city. The whole



A STREET IN THE OLD TOWN, CAIRO.

of the new town—which has been constructed between the native quarter and the Nile—including barracks, government offices, palaces, and hotels, also presents a European aspect. The vegetation alone, enclosed by railings in the gardens, and the shady lebek acacias planted on both sides of the broad streets, remind the observer that he is still in Egypt. Elegant structures, surrounded by verdure, present a pleasant contrast to the commonplace buildings of this new quarter.

Some broad and straight thoroughfares, lined by houses in a vulgar style of architecture, have recently been opened through the heart of the old quarters; but with these exceptions, Cairo has almost everywhere preserved its characteristic physiognomy. These irregular streets, some broad, some narrow, winding at abrupt angles between buildings facing in all directions, present an endless variety of perspective. Here we come upon irregular "squares" or open spaces, flanked by the painted arcade of some picturesque mosque; elsewhere the two sections of a palace meet overhead by vaulted galleries thrown across the street; right and left are gates leading through intricate byways to blind alleys, or traversing courtyards surrounded by overhanging balconies gay with strips of tapestry fluttering in the breeze. Here and there marble colonnades or carved porticoes project from walls of grey or red brick.

The musharabiehs all differ in the patterns of their gratings or lattice-work. Unfortunately these musharabiehs (meshrebiyehs) are gradually disappearing, at least from the more frequented thoroughfares. They are simply projecting windows or casements made of ingeniously designed lattice-work, or else, in the poorer houses, merely of rough boards; and there are still not a few houses where the passenger stops to admire tier upon tier of these singularly picturesque contrivances. The name is derived from a root meaning to drink, as in "sherbet," and is applied to the musharabiehs because the porous water-bottles are often placed in them to cool. "The delicately turned knobs and balls by which the patterns of the lattice-work are formed, are sufficiently near together to conceal whatever passes within from the eyes of opposite neighbours, and yet there is enough space between them to allow free access of air. The musharabieh is indeed a cooling place for human beings as well as water-jars, and at once a convent grating and a spying-place for the women of the harem, who can watch their enemies of the opposite sex through the meshes of the windows without being seen in return." *

The different stories even of the same house at times present a variety of contrasts in their architecture and their projecting lines, corbels, and gables. In some quarters all the upper part of the structure spreads out like a huge Chinese folding-screen, furnished with numerous nooks and corners, whence the inmates may survey the passing scenes at their leisure. The very temperature is varied by the different character of these edifices, with their supporting beams and matting suspended at different elevations above the roadway. Gloomy passages are here and there suddenly relieved by a flood of dazzling light, and the wayfarer's progress is constantly arrested by heaps of unsavoury refuse, pools of stagnant water, or whirlwinds of

* "Social Life in Egypt," p. 9.

blinding dust. In these quarters of the old town the inhabitants themselves present as great a diversity of types as do their quaint and rickety dwellings. Egyptians and Nubians, Arabs and Negroes, jostle each other in the narrow lanes, selling their wares, crowding about the hucksters' shops, or collecting in picturesque

Fig. 125.—MUSHARABIEH, WITH SCREEN IN FRONT TO CONCEAL THE INMATES FROM THEIR NEIGHBOURS.



groups round about some noted story-teller. But the most shifting scenes of this strange panorama, the most varied types and costumes, are to be seen chiefly in the Muski and other streets in the neighbourhood of the bazaar, where the direct traffic is carried on between the natives and Europeans. Here veiled women, Mussulmans or Copts, glide rather than walk silently by, moving heaps of clothes, with nothing

exposed except the eyes peeping through a slit in the veil attached to the head-dress by a gold clasp. The country women, dressed in a simple flowing robe, moving freely with the movements of the body, go nearly all unveiled, like their Syrian, Levantine, Jewish, and European sisters, all of whom may be easily recognised by their type, their carriage, dress, style, and manner, as they move amongst the busy crowd, or stop to examine the tempting display of goods in the well-stocked shops.

The graceful Nubians in their long white smocks, Bedouins proudly draped in rags and tatters, Negroes of every tribe, each with the distinctive marks of his nationality stamped on his features, intermingle freely with the native Egyptians, distinguished by their official garb and tarbush headdress, with Europeans of every nation still more or less faithful to the costume of Western civilisation; with soldiers of all arms in helmets, turbans, or other oriental or ancient headdress. Followed by their little donkey-boys shouting and gesticulating, the magnificent Egyptian asses trot nimbly by, however tall or heavy be their riders. But military chiefs and wealthy strangers prefer the graceful Arab steed, or elegant European equipages, which drive rapidly through the crowd preceded by a *saïs*, or running footman, dressed in the gorgeous Albanian costume bedizened with gold and silk, and armed with the traditional rod, which was formerly freely used to clear the road of loiterers. At times, overtopping the throng, like some magnificent "wise man of the East" out of a painting by Rubens, some Negro captain makes his appearance, clothed in white and red silk, glittering with damascened arms and mounted on a gigantic camel, with its embroidered cloths and velvet housing fringed in gold.

At present instances of foreigners being insulted by fanatical Mohammedans are almost unheard of, except when they behave in an offensive manner. They may now move about freely even in the neighbourhood of the El-Azhar mosque, where reside the more zealous champions of Islam. The gay wedding processions and solemn funerals may be followed without any risk through the narrowest byways of the native quarter. The great religious ceremonies, at which Christians could not formerly be present except protected by the police and soldiers, have been shorn of much of their ancient splendour, and certain parts of the original programme are henceforth interdicted.

The chief local feast is that of the "Cutting," by which the beneficent waters of the rising stream are admitted to the town canals. But the essentially religious solemnities are those associated with the departure and arrival of the pilgrims from Mecca. At the feast of *Mahmal*, or the Departure, by the Europeans called the "Carpet Feast," a camel decked with embroidered trappings, plumes, and burnished metal ornaments, bears a sumptuous litter containing the yearly present sent by the Khedive to the Kaaba of Mecca. It is preceded by musicians and troops, and followed by a motley throng of pilgrims of every race and colour. On the return of the sacred caravan the anniversary is celebrated of the birthday of the Prophet, during which the city is given up to the dervishes, dancers, and jugglers. No more favourable opportunity is afforded for studying the varied elements of the population of Cairo. All the back slums and remote recesses of the native districts now

pour forth their Arab, Negro, Abyssinian, Beja, Somali, and Nubian denizens on the public squares and into the great plain near the suburb of Bulaq, where the sheikh of the dervishes passes on horseback over a layer of human bodies. The noble animal resists at first, but the bridle being held by two slaves, he is forced to follow them over this carpet of living flesh. The presence of English troops summoned to take part in this feast in the year 1884 served to remind the Mussulmans that henceforth the city of Amru was in the hands of the infidel.

The most remarkable monuments of Cairo are its mosques and tombs. Of the four hundred sacred edifices scattered over the city, some are amongst the very finest in the Mohammedan world. The mosque of Tulun, which formed part of the Fostât settlement before the foundation of Cairo, although falling to ruins, still preserves the beauty imparted by the noble simplicity of the original plan—a large open court surrounded on three sides by a double peristyle and leading to a sanctuary with four aisles and pointed arcades built of date wood. Unfortunately the galleries, decorated with charming arabesques, have been closed up and converted into mean refuges for the sick and insane.

Sultan Hassan's mosque, the finest in Cairo, and indicated from a distance by its lofty minaret, is threatened, like that of Tulun, with total destruction. At sight of the tottering windows of its high outer walls the visitor almost hesitates to enter the court where the cool fountains still spatter, or to cross the threshold of the sanctuary and lateral aisles beneath the vast porticos tenanted by flocks of birds.

The El-Azhar, or "Flowery" mosque, was also originally a simple court enclosed by porticos. But to the primitive structure have been added numerous other buildings, for El-Azhar is now at once a university, a library, a hostelry for studious travellers, a blind asylum, and a refuge for the poor. The roof of the sanctuary is supported by 380 marble, granite, and porphyry columns, some of which formerly embellished the Roman temples in Egypt. Round the court the colonnades are reserved for students, who are here grouped according to their several nationalities. From Marocco to India, from the Niger to the Oxus, all the peoples of Islam are represented in this university, which claims to be the oldest in the world. As many as twelve thousand students, exclusive of the free attendants, here study the Koran, jurisprudence, mathematics, and the Arabic language, under the direction of two hundred professors. In the *Ricâk*, or group of buildings disposed round the aisles, there are also about a dozen preparatory schools, each with thirty or forty scholars, besides a special school for the blind.*

Another mosque, that of Sultan Kalâun, is almost entirely utilised as a mad-house. That of Mohammed Ali, situated within the citadel, is certainly a very sumptuous edifice, with its transparent alabaster pillars and pavement; but its very wealth of ornamentation serves only to illustrate the bad taste of its builder.

* Students registered at El-Azhar in 1883 . . .	12,025 .	Professors, 216 *
" of the Shafeh rite . . .	500 .	" 100
" " Malekite rite . . .	4,000 .	" 74
" " Hanefite rite . . .	1,500 .	" 37
" " Hambalite rite . . .	25 .	" 1



THE KAIT-BEY MOSQUE, CAIRO.

The so-called "Joseph's Well," sunk near the mosque by order of Yūsuf Salah-ed-din (Saladin the Great), descends to the level of the Nile at a depth of 286 feet. From the surface of the ground to about half of this depth a winding incline enables the oxen to reach a landing, whence the water is raised to the top by working a system of buckets.

South of the citadel in the direction of Old Cairo, and northward of the fort of the Jebel-Mokattam, other mosques of all sizes raise their graceful domes above

Fig. 126.—Mosque of MOHAMMED ALI



the tombs of kings and princes. These elegant structures present a striking contrast to the bare ground, here strewn with all manner of débris, and to the rugged walls of the surrounding quarries. The Kait-bey mosque, north of the cluster of hills, dates from the fifteenth century, but has been recently restored. It is, perhaps, the most perfect specimen of Arab architecture in Egypt, at least as regards the arabesque and geometrical designs of its fretted walls, and the exquisite symmetry of its minaret, disposed in corbelled galleries. Thus the country which

boasts of the pyramids and similar structures of unequalled solidity, may also claim to possess in its minarets edifices unrivalled for the elegance and delicacy of their outline.

The first city on the African continent in size and population, Cairo also takes the foremost place for its scientific institutions and art treasures. Besides the already described religious university of El-Azhar, and the hundreds of Arab schools attached to the mosques, the city contains excellent European schools, nearly all denominational—Catholic, Coptic, Melkite, Protestant, or Jewish. There are also a school of medicine and pharmacy, a public library, lecture-halls, an observatory, a valuable collection of maps and designs, unfortunately damaged when the place was occupied by the British, a geographical society, and other learned corporations.

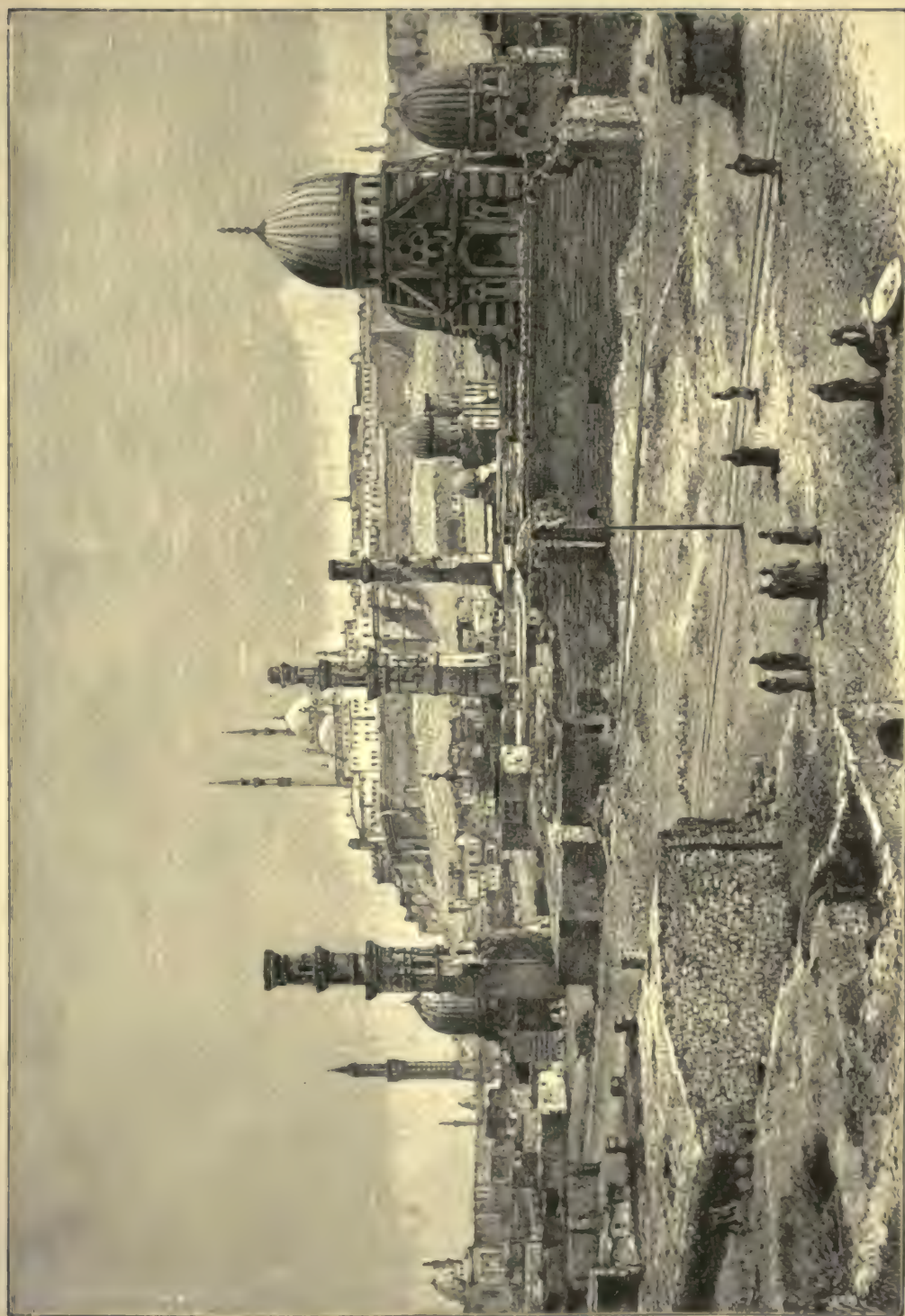
BULAQ, HELWAN, MATARIEH.

But the glory of Cairo is its museum of antiquities, established in the suburb of *Bulag* on the very embankment here skirting the right side of the Nile. This priceless collection, founded by Mariette, continued by Maspero, and already far too rich for the original building, presents, so to say, a complete and admirably illustrated course of Egyptian history and native art. Besides the thousand objects found in all museums, such as statues, steles, mummies, amulets, jewellery, papyri, it contains amongst other masterpieces the diorite statue of Khephren in a majestic and placid attitude, the wooden statue of the unknown person whom the Arabs have dubbed the Shiekh-el-Beled, or "Village Chief," the sphinxes of the Hyksos, which so faithfully reproduce the type of those shepherd conquerors.

In the court stands the tomb of Mariette, a black marble sarcophagus, standing at the foot of which the visitor beholds the mysterious stream flowing slowly by. *Bulag* is the chief industrial centre of the capital. Here the Government possesses a large printing-office, military workshops, a foundry, and manufactory of small arms. The river traffic, which formerly had its docks and warehouses at Old Cairo, has now established its chief dépôts at *Bulag*, where the stream is constantly covered with steamers, sailing vessels, and rowing boats.

What remains of *Fostât*, or Old Cairo, stands rather more than half a mile from the south-west suburb of Cairo, and is disposed along the right bank of a small branch of the Nile. The ancient splendour of the city is still recalled by a mosque surrounded by heaps of débris. This was the sanctuary erected by Amru in the twenty-first year of the Hegira under the eyes of Mohammed's personal followers. After those of the holy cities no other mosque is more venerated than this venerable monument, which, however, has been frequently restored. Some of the 230 columns which supported the vaults of the galleries and sanctuary built round the central court have given way beneath the weight of the nave.

The island which separates Old Cairo from the main channel, and which is mostly under cultivation, takes the name of *Jeziret-el-Randah*. Here a nephew of Saladin had founded the school of the "Baharites," or "Riverain People," who were the first Mameluks in Egypt. At the southern extremity of *Randah* stands the famous



CITADEL OF CAIRO.

mekyâs, or "Nilometer," which in some years is so anxiously consulted to ascertain the progress of the inundations. The ancient Nilometer, which has been replaced by that of Randah, occupied a position farther up on the right bank of the river, over against Memphis.

Connected with the capital of Egypt is the watering village of *Helwan*, which is situated 14 miles to the south by rail, near the right bank of the Nile. Its sulphureous waters, which are slightly thermal (74° to 86° F.), are said to be very efficacious. Numerous palaces are dotted round the village, mostly encircled by parks or gardens, some of which cover some square miles in extent. On the left bank facing Cairo are the palaces of *Gizeh* and *Jezireh*, while to the north of the capital stands the palace of *Shubrah*, connected with the railway terminus by a magnificent avenue of sycamores, which is lined by pleasant suburban residences. To the north-east, on the verge of the desert, are visible the palaces of *El-Kubbeh* and *El-Abbassieh*, at present occupied by the polytechnic and military schools.

This palace is not far from the village of *Matarieh*, which covers part of the site of the ancient "City of the Sun," the *Pè-Ra* of the Pharaohs, the *Heliopolis* of the Greeks, where the Egyptian priests came to be initiated into the esoteric doctrines of the national religion. Of this city of temples and schools there remain only the foundations of two enclosures and an obelisk, which was raised by Usortesen I. forty-six centuries ago, and which since then has gradually subsided over 30 feet into the ground. It is the oldest of all existing obelisks. In the surrounding marshes still survives the species of heron known as the *ardea garzetta*, which has become so famous in the history of symbols and in legend under the name of the phœnix. At intervals of five hundred years, on the day of the summer solstice the sacred bird was fabled to return from Arabia or India, and perch on the summit of the Temple of the Sun. Here it was consumed on a pyre of scented wood, ever rising from its ashes with renewed life.

The village of *Matarieh* on the right, as well as that of *Embabe* on the left bank of the Nile, recalls the memory of some famous battles. At the latter place Bonaparte gained the so-called "Battle of the Pyramids," while a Turkish army was routed by Kleber at *Matarieh* and in the ruins of *Heliopolis*. In a delightful garden at *Matarieh* the Coptic monks show the "Virgin's Tree," a sycamore less than three centuries old, beneath which the Holy Family is supposed to have rested on the flight to Egypt. *Matarieh* is the only place in the delta where ostrich farming is at present carried on.

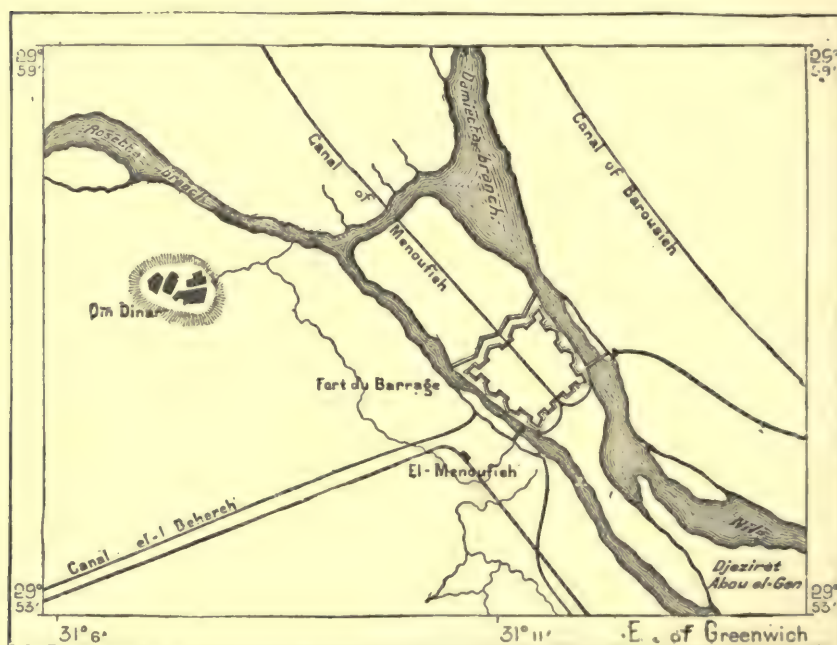
BARRAGE OF THE NILE.

The barrage of the Nile, whose crenellated towers loom in the distance like the battlements of a citadel, must be included amongst the monumental works of the Egyptian capital. Formed of two bridges with one hundred and thirty-four arches altogether and over half a mile—or, including the approaches, more than a mile—long, it runs athwart the stream some 12 miles below Bulaq, at the point where the Nile ramifies into two main branches. Here the intermediate cutting of the

Menoufieh Canal intersects the large island of Shalaganeh, which has been converted by walls and ramparts into a fortified stronghold. This is the important fortress of *Saadieh*, which at once commands both branches of the Nile, and the two principal lines of railway in Lower Egypt. This colossal work, the first stone of which was laid by Mohammed Ali in the year 1847, was originally planned for the purpose of reclaiming many tens of thousands of acres of waste land and regulating the navigation throughout the whole of Lower Egypt. But the enthusiasm of the Albanian viceroy was not sustained by an equal degree of perseverance, and some parts of the general design were either neglected or indifferently executed. Hence the foundations have partly given way, wide openings are visible in many of the

Fig. 127.—BARRAGE OF THE NILE.

Scale 1 : 110,000.



arches, and of the three canals, the Sharkieh, Beharah, and Menoufieh, that should have been excavated, the last-mentioned alone has been completed.

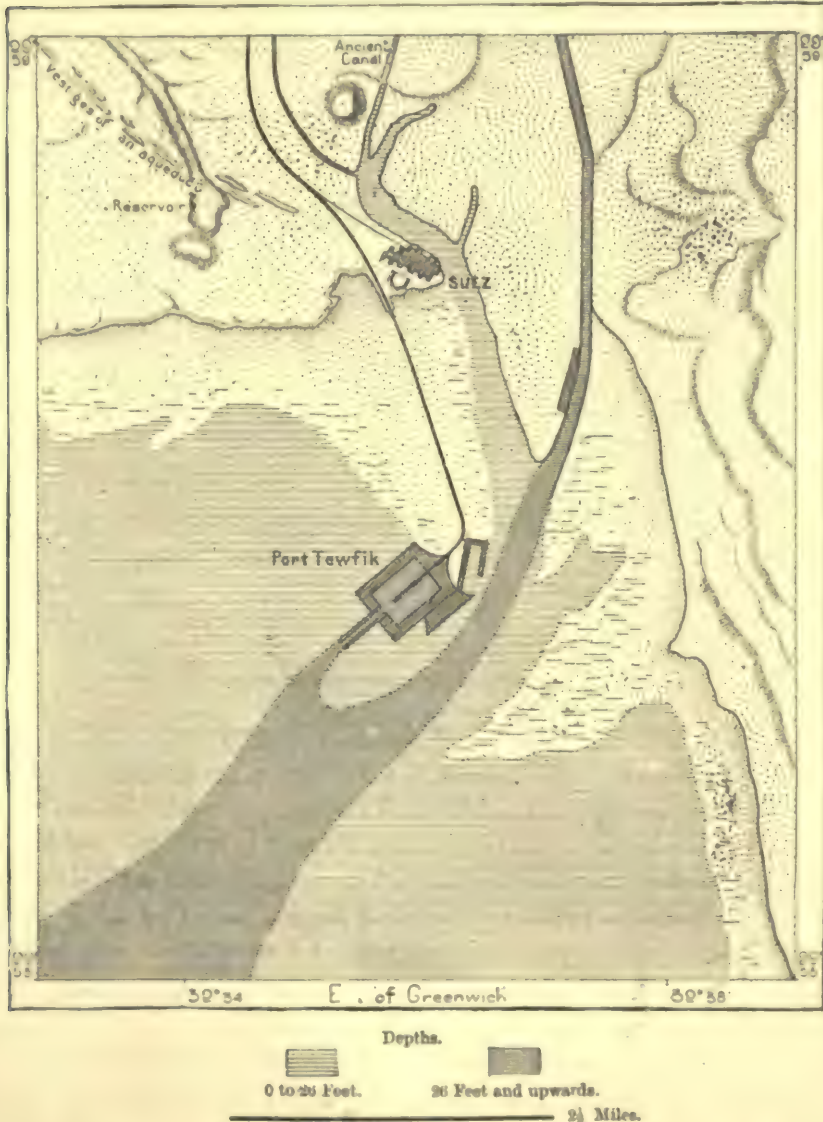
Nevertheless even in its present unfinished state the barrage of the Nile is by no means an altogether useless work, the lamentable monument of an aimless prodigality, as it has been so often described. It serves at least every year to raise by 6 or 7 feet the water level of the main stream. According to the English engineer Fowler, a farther outlay of about one million sterling would be needed to raise the level by 16 feet, as originally intended, to strengthen the foundations, and complete the system of canalisation. But at the same time it would be also necessary to modify the original plan, in order to prevent the constant accumulations of sedimentary matter above the barrage, or else construct navigable canals along this section of the Nile.

SUEZ.

Before the opening of the Suez Canal, Cairo was connected with its port on the Red Sea by a direct line of railway, crossing the desert through the depressions followed by the ancient pilgrims' route. The present seaport of *Suez*, lying at the

Fig. 128.—SUEZ.

Scale 1 : 90,000.



southern extremity of the marine canal, has replaced the *Clysma* of the Greeks, the *Kolzim* of the Arabs, which has by some archæologists been identified with the *Tell-Kolzum*, lying nearly four miles farther north, and by others with the station of *Arsinoe*, afterwards known as *Cleopatra*, whose site has been sought farther east, not far from the village of *Agerut*.

Traces of the former presence of the waters of the Red Sea may here be still traced all the way to the Bitter Lakes. The waters have gradually retired, and if the town had to follow the progress of subsidence it would have to be again displaced and rebuilt some two miles farther south at the entrance of the canal. Here has been created the modern port of *Teufik*, enclosed by two diverging piers 7,700 feet long, and lined with warehouses belonging to the Suez Canal Company. At the end of one of these piers a few trees have been planted round the statue of Waghorn, a man distinguished beyond all others before the time of Lesseps by his persistent endeavours to open up more rapid communications between England and her Indian possessions.

Suez, which has lost the aqueducts constructed under the Ptolemies, now receives its supply of fresh water through a canal derived from the Nile and running through the Wady-Tumilât. Hence the town might now be freely developed without running the risk of perishing from thirst, as at the time when it had to depend entirely on the brackish wells sunk at the foot of the Jebel-Attakah. But after rapidly expanding at the time of the construction of the inter-oceanic canal, Suez has again diminished in population and importance. It derives little advantage from the ever-growing traffic between the two seas, because most of the interminable line of steamers pass on after getting their papers signed. The chief depôts of supplies for the shipping have been established, not at the head of the Red Sea, but at Port Saïd, at the northern extremity of the canal, facing Europe. Nevertheless, sufficient local trade has been developed in connection with the through traffic to enable Suez to rank next to Alexandria and Port Saïd in the general commerce of Egypt.*

BALBEIS—ZAGAZIG—BUBASTIS.

At present the railway connecting Cairo with its port on the Red Sea skirts the northern foot of the advanced spurs of the Arabian or coast range, running thence to the canal along the depression of Wady-Tumilât. Here was the land of Goshen, cultivated by the "Impure," that is, by the Hebrews in bondage; and the Tumilât Arabs, who give their name to the district, have also become agriculturists. The presence of the Israelites in this region is still commemorated by the Tell-el-Yahud, or "Jews' Hill," a small eminence lying not far from the station of *Shibin-el-Kanater*. Here have been discovered some vestiges of an edifice erected by Ramses II.

Farther on stand the towns of *Balbeis* and *Bordein*, in this vast and well-watered plain, where every village is surrounded by cotton plantations and by the tall chimney of some factory built amid the palm-groves, where the raw fibre is cleansed and compressed into bales for exportation, mostly by Greek agents of the growers.

* Trade of the Port of Suez in 1880 according to Amici :—

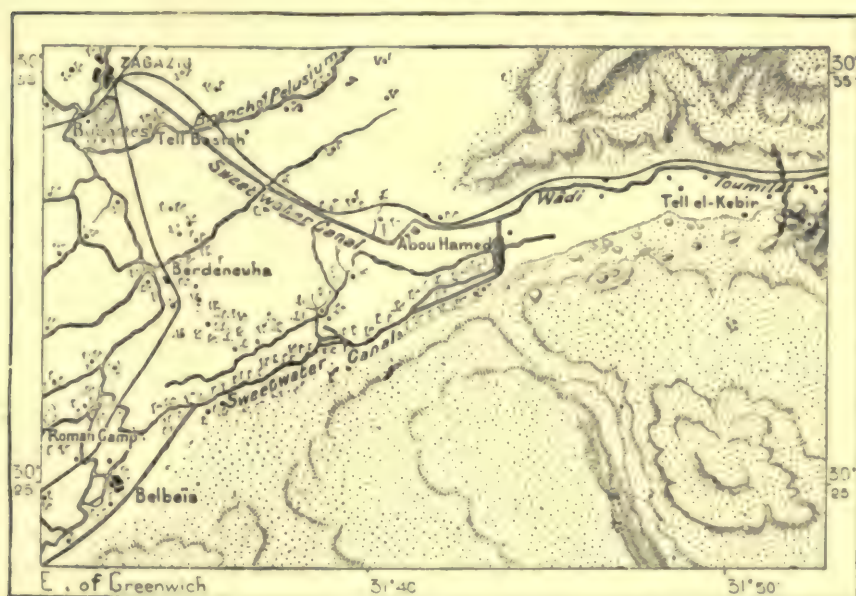
Arrivals	581 vessels of 682,110 tons
Departures	563 ,, 677,626 ,,
Total	1,144 ,, 1,359,736 ,,

But the great entrepôt for the cotton and the cereals of this region of the delta is the populous city of *Zagazig*, which occupies a central position at the junction of several lines of railway, over against the western outlet of Wady-Tumilât. The population of this place has increased fivefold since the year 1860, thanks chiefly to the development of the cotton plantations.

South of the Zagazig gardens a number of high mounds, collectively known by the name of *Tell-el-Bastah*, still recall the ancient city of *Pabast*, the *Bubastis* of the Greeks, which was the capital of Egypt some twenty-seven or twenty-eight centuries ago; that is to say, during the twenty-second dynasty, when the frequent

Fig. 129.—ENTRANCE OF THE WADY-TUMILÂT, TELL-EL-KEBIR.

Scale 1: 340,000.



wars with Assyria required the centre of gravity of the kingdom to be shifted more towards the east. Broken shafts and sculptured blocks still scattered about attest the former splendour enjoyed by this now ruined city. North-east of it, on the very verge of the wilderness and on the last irrigating canals derived from the Nile, lies the village of *Karaim*, surrounded by palm-groves which have the reputation of yielding the finest dates in Egypt.

TELL-EL-KEBIR—PITHOM.

The entrance of the Wady-Tumilât is guarded on the west by the station of *Tell-el-Kebir*, that is, the "Great Mound," where in the year 1882 the Egyptian forces under Arabi vainly attempted to make a stand against the British expedition advancing from Ismailia, its base on the Suez Canal. The fortifications erected by

Arabi were partly stormed, partly outflanked, after a midnight march planned with a skill and executed with a precision seldom surpassed in the annals of European warfare. A palace standing in the neighbourhood of Tell-el-Kebir forms the central point of the so-called "Farm of the Wady," a domain about 25,000 acres in extent, which was cultivated for several years by the Suez Canal Company.

Near the eastern extremity of the Wady-Tumilât other mounds collectively known as the *Tell-el-Maskhata*, and in appearance resembling Tell-el-Kebir, were hitherto supposed to indicate the site of the ancient *Pithom*, the "City of Treasure," here erected by the captive Israelites for Ramses II. Recently, however, M. Naville has thoroughly explored these ruins, which now appear not to be those of the city of Ramses, but of another which has been identified as the *Pi-Tum* or *Pithom* of Exodus, and which seems to have been built about the same period and by the same hands. During the Greek and Roman epochs Pithom was known by the name of *Hero*, or *Heroopolis*.

This identification of the ruins explored by M. Naville at Tell-el-Maskhata, has given rise to much controversy amongst Egyptologists, one of whom goes so far as to say that "the Pithom of the Exodus is apparently as far to seek as ever."* Dr. Ebers, however, who is one of the chief authorities on archæological questions of this sort, after carefully sifting all the evidence, finally decides in favour of M. Naville's view. In a long communication to the *Academy* he writes, "Now I have attentively and impartially studied the inscriptions excavated by M. Naville, and fully discussed them in the *Allgemeine Zeitung*, after having gained the firm conviction that Tell-el-Maskhata is the site on which, in the time of Ramses and subsequently, there was a city called by the sacred name of Pi-Tum, *i.e.* Pithom, and by the profane one of Thuku-t, being doubtless the same as *Succoth*. It is true that Sir Gardner Wilkinson, Dr. Lepsius, M. Maspero, and myself as well, had regarded Tell-el-Maskhata as the site of the biblical Ramses. After the appearance of M. Naville's book, however, there will scarcely be found a single Egyptologist who will still adhere to this view, and refuse to look upon Tell-el-Maskhata as the site of an Egyptian town which bore the sacred name of Pithom and the profane one of Thuku-t. The first object confirming this view was the inscription on the statue of the prophet of Tum of Theka, which begins, 'When under his majesty it was proclaimed how the sanctuary of his father Tum of the good god of Thekut was completed on the third of the month of Athyr, the king himself came to the district of Heroopolis, into the house of his father Tum,' &c.

"These inscriptions render it so certain that Pithom and Thuku-t were one and the same town, and that both were built on the site of the modern Tell-el-Maskhata, that we may dispense with the further evidence afforded by the Anastasi papyrus. Here King Merneptah, very probably the Pharaoh of the Exodus, states in writing his having permitted the Shasu (Bedouins) of Atuma (Edom?) to cross the fortress bearing his name, which was also called Theku, in the direction of the ponds of Pithom of the king Merneptah, which is called Theku."†

* *Athenæum*, April, 1885, No. 2994.

† *Academy*, May 23rd, 1885, p. 373.

ISMAILIA—EL-KANTARA.

At *Nefish*, in the same district, the road and the Freshwater Canal running to Suez turn towards the south-east, whilst another branch of the canal takes a north-easterly direction to the new city of *Ismailia*, on the shores of Lake Timsah. While the great canal was in progress Ismailia enjoyed great importance as a chief centre of the supplies for the hands engaged on the works. But at present it is far too extensive for its reduced population. Its open spaces are deserted, and its streets, fringed by shady trees and skirted here and there by gardens and shrubberies, resemble the avenues of a park more than the thoroughfares of a commercial town. Nevertheless, Ismailia might again become inhabited, were the stream brought by the Freshwater Canal made more generally available for the irrigation of the oasis already reclaimed from the surrounding desert.

Nor is this artery much used for navigation, although it has a normal depth of 10 feet and a width of about 180 feet, sufficient to give access to vessels of 400 tons burden. Some traffic, however, is carried on by means of the Suez Canal, and the port and open waters of the lake are often crowded with large vessels riding at anchor in these inland waters. Exclusive of the transit trade, the movement of the port of Ismailia amounted, in 1882, to over two hundred and seventy steamers, with a gross tonnage of nearly 600,000 tons.

Along the line of the canal from Ismailia to Port Saïd the only station deserving the title of village is *El-Kantara*, or "the Bridge," so named from a small structure of this sort which here formerly crossed a channel flowing between Lakes Ballah and Menzaleh. Standing on an isthmus between inundated tracts, *El-Kantara* formed an indispensable station for all caravans along the main highway between Asia and Africa. This station is even still annually used by several thousand camels, which are watered at the great reservoirs that the Company has here constructed near the banks of the canal. In Lake Ballah, to the west of *El-Kantara*, a large "gare," or shunting station, is to be formed for the convenience of steamers using the canal.

PORT SAÏD.

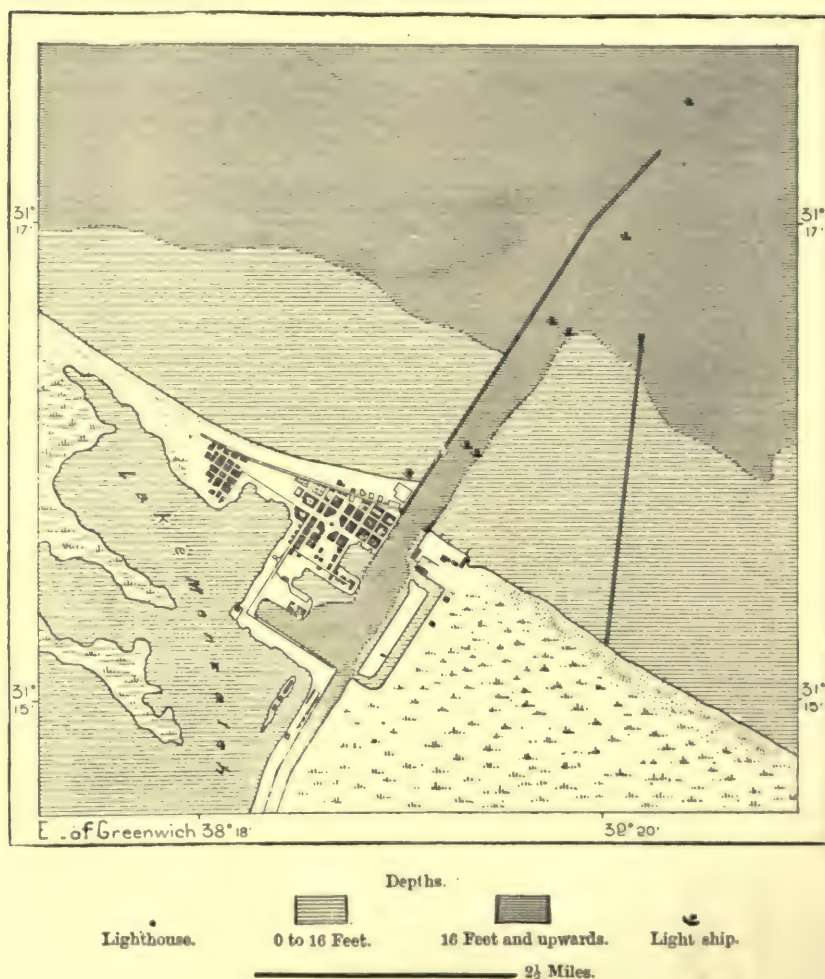
Port Saïd, which, like Ismailia, is a new town, but full of life and bright prospects, thanks to the constantly increasing navigation of the great marine highway, has been founded on the narrow strip of sand separating Lake Menzaleh from the Mediterranean. The creation of this city on a surf-beaten strand fully twenty-four miles from all freshwater streams, from any cultivated lands, or the smallest clump of trees, may be regarded as one of the triumphs of modern industry. Lying between the open roadstead and the inner basins of the harbour, Port Saïd consists of some fifty islets, separated from each other by broad streets disposed mainly at right-angles. Most of the houses, built either of wood, brick, or iron, are used as warehouses and depôts for all kinds of produce and provisions, as rich and well-stocked as similar structures in the European trading-places.

At a distance of a few hundred yards from the European town stretches the Arab quarter, in which more than one building in the style of the "Infidels" has already sprung up, and which promises ere long to be completely surrounded by its flourishing neighbour. In any case the bed of Lake Menzaleh, which is here very shallow, offers an unlimited space for the development of the city.

The outer port is sheltered by two breakwaters built with blocks of concrete weighing 20 tons each. The western structure is 8,300 feet, the eastern 6,300 feet

Fig. 130.—PORT SAÏD.

Scale 1 : 90,000.



long, and they jointly enclose a space of about one square mile in extent, which gives ample room for the largest vessels to ride at anchor, and which in front of the city ramifies into several basins, affording a further space of 175 acres for the shipping. Facing the city on the east or Asiatic side are vast depôts of coal, of which over 540,000 tons were imported in the year 1883. On the southern or African side are the workshops and dry docks built for the construction and repair

of vessels, and especially of the dredges employed in the canal. Here there is an incessant movement of steamers, yawls, and other craft plying from bank to bank, while larger shipping is moored near the quays, and men-of-war cast anchor in the roadstead near the lighthouse.

Although situated on Egyptian territory, Port Saïd is a European, or rather a French city, as regards its inhabitants, its social life, and local traffic. French is the dominating language, and in it instruction is imparted to the fifteen hundred pupils of the rival establishments opened here by the Capuchin friars and the Freemasons. Port Saïd is the healthiest place in Lower Egypt. By means of cast-iron pipes it derives its water supply from the Ismailia Canal at the rate of about 35,000 cubic feet a day, a quantity which barely suffices for the wants of the inhabitants, leaving nothing for irrigation purposes. Hence the surrounding gardens languish, and the great want of the place is avenues of shady trees, such as have been planted at Ismailia.

Hitherto the Suez Canal Company has in vain made every effort to obtain the concession of a canal derived directly from the Damietta branch of the Nile, although it has offered in return to give commercial unity to Egypt by connecting its seaport with the local railway system by means of a branch constructed across Lake Menzaleh. Fearing to be supplanted by Port Saïd, Alexandria employs all its influence to check the progress of its eastern rival, which nevertheless cannot fail sooner or later to acquire the commercial supremacy, thanks to its spacious and convenient harbour, and to its situation at the northern extremity of the inter-oceanic canal.*

EL-ARISH—PELUSIUM—SAN.

East of Port Saïd Egypt still possesses a group of habitations which, as the chief town of a province, may claim the title of city. This is *El-Arish*, which stands on an eminence commanding the approach to a wady, usually regarded as the natural frontier between Egypt and Palestine, at the exact centre of the concave bend here developed by the Mediterranean coast-line. But of the ancient cities, situated in this north-eastern district of Egypt no vestige can now be discovered, everything having been thickly overlaid by alluvial deposits.

Of *Pelusium*, the "City of Mud," nothing is visible, except a mound in the midst of the swamps, not far from a depression once flooded by the Pelusiæ branch of the Nile. Farther west the two islands Tenneh and Tunah have nothing to show except shapeless heaps of refuse. More important remains, however, have been left by *San*, or *Tanis*, which under the name of *Ha-war*, or *Acaris*, was the ancient capital of the "Shepherd Kings," and at one time one of the great cities of Egypt. The mound standing near the southern shore of Lake Menzaleh still bears

* Shipping of Port Saïd, exclusive of vessels in transit, in 1880, according to Amici:—

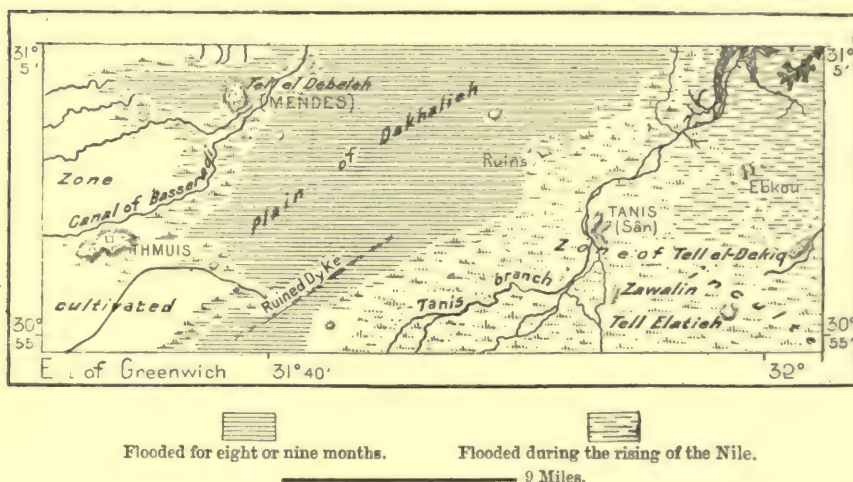
Arrivals	1,507 vessels of 997,611 tons.
Departures	1,530 " 997,395 "
Total	3,037 " 1,995,006 "

the ruins of three temples ; and here have been discovered columns, obelisks, and the remarkable sphinxes which represent the type of the Hyksos, with their broad features, large nose, and prominent cheek-bones.

All these monuments were executed in materials far more costly than similar works in Upper Egypt. The building-stone for the temples was brought by Ramses II., not from the nummulitic or sandstone rocks lying nearest to the delta, but from the pink granite quarries of Assuan, on the southern frontier of the empire. But of these sumptuous edifices, whose remains lie strewn over the mound at San, nothing was respected by subsequent generations of builders, whether Romans, monks, Christians, or Arabs. Not one of the fourteen obelisks, the largest in all Egypt, has survived ; while the colossi have been broken into small fragments and even ground to dust. Amongst the ruins, however, has been discovered the precious "Stone of San," a tri-lingual *stele* which might have revealed the mystery

Fig. 131.—THE SAN MORASS.

Scale 1 : 480,000.



of the hieroglyphics, had not Champollion and Young already found a clue to their interpretation in the "Rosetta Stone."

The enclosure surrounding the great temple is no less than 80 feet thick,* and the modern observer may well ask how such a metropolis could have been raised in the midst of these half-submerged lands, these swamps, and quagmires, and saline depressions now skirting Lake Menzaleh. But the district seems to have undoubtedly undergone vast changes since the oldest recorded times, changes which should probably be attributed to local subsidence.

Although the less copious of the two Nilotic branches enclosing the delta, that of Damietta is utilised to a far greater extent for irrigation purposes, thanks to the higher level of its bed. Along its course are situated some large towns, while in many places numerous villages form an almost continuous city. *Benha-l-Assal*, or the "City of Honey," which supplies the inhabitants of Cairo with considerable

* Flinders Petrie, *Times*, April 24, 1884.

quantities of this commodity, with the other produce of its gardens and orchards, derives some importance from its position at the converging point of the three lines of railway between Alexandria, Cairo, and Zagazig. Here the river is traversed by a long viaduct. Near the station another "tell" or mound of ruins, situated like the modern town on the right bank of the Damietta branch of the Nile, is all that now remains of the ancient *Athribis*.

MANSURAH—DAMIETTA.

Mit Ghamr and *Ziftah*, which face each other on both banks of the river, are amongst the most populous cities of the delta. Lower down on the right bank *Samanhud*, the *Sebennytos* of the Greeks, and the birthplace of Manetho, the historian, possesses in the neighbourhood the remains of a temple, the Iseum of Ptolemy Philadelphus, which is now known by the name of *Behbeit-el-Hagar*.

Mansurah, or the "Victorious," which follows on the right bank, preserves no monuments of the past, but is one of the most commercial and industrious cities in Egypt, and capital of a province. It was here that the French King Louis IX. fell into the hands of the Mohammedans. Twenty-nine years previously—that is, in 1221—the Crusaders had been defeated in the same place, and it was to commemorate these triumphs of the Crescent over the Cross that the "Victorious" was founded.

At Mansurah the Bahr-es-Sogheir channel branches off from the Nile, and flows to Lake Menzaleh, which it has divided into two basins by a peninsula formed of its alluvial deposits. At the extremity of this low marsh-encircled peninsula stand the two towns of *Menzaleh* and *Matarieh*, inhabited by poor communities of fishermen, whose type, according to Mariette, betrays their lineal descent from the Hyksos, who overran Egypt thousands of years ago. The profits of these fisheries are almost entirely forestalled by the sheikhs of Matarieh, some of whom have become millionaires.

Damietta, or *Dumiat*, which gives its name to the east branch of the Nile, still remains the largest city on its banks. However, it does not stand on the same site as its Greek predecessor *Tamiathis*, which stood on the left bank quite close to the mouth of the river. But immediately after the unsuccessful siege laid to the place by Louis IX., Sultan Bibars caused it to be demolished, and removed the inhabitants some six miles farther up, to a point less accessible to an enemy arriving by sea, and near an abrupt bend in the channel, which might easily be defended against a hostile fleet.

The modern Damietta manufactures various kinds of textile fabrics and does a considerable trade in rice, salt, and fish. Here, also, vessels engaged in the coasting trade between Syria, Asia Minor, and the Ægean Sea, come for their supplies of provisions, which they take in exchange for various manufactured goods.* But

* Movement of the Port of Damietta in 1880, according to Amici:—

Arrivals	1,198 ships of 83,215 tons.
Departures	1,176 " 79,996 "
Total	2,374 " 163,211 "

the entrance to the harbour is dangerous, and shipping is sometimes prevented by the rough seas for days together from entering the river. The great mosque of Damietta, built by Amru, and remarkable especially for the richness and variety of its marbles, is indebted for the exceptional celebrity it enjoys to its "miraculous" column still covered with clotted blood and dry foam. According to the local tradition, all invalids who come with sufficient faith and lick the stone till their tongue bleeds are sure to recover. Nevertheless, the recent history of Damietta has

Fig. 132.—DAMIETTA.

Scale 1 : 100,000.



made it sufficiently evident that a far more efficacious way of getting rid of epidemics would be to sweep the streets clean of the filth encumbering them at every turn.

In an often inundated plain which stretches south-west of the city in the direction of Lake Burlos, there is another holy place, where miracles continue to be wrought, not, however, by Mussulman hajis, but by a female Christian saint. This is the Coptic convent of *Setti-Damiana*, or "Our Lady Damian."

MENUF, TANTAH.

In the part of the delta comprised between the two branches of Damietta and Rosetta, a few commercial towns are scattered in the midst of the canals and irrigation works. Such are *Menuf*, which gives its name to the large Menufeh Raya, or canal, where have been found the fragments of a trilingual stone, *Shibin-el-Kour*,



over 10000 5000 5000 under 5000 m.

SUEZ CANAL.



lying in a lagoon whose winding waters discharge themselves into Lake Burlos; *Tantah*, a city of merchants; *Mahallet-el-Kebir*, or the "Great City," which formerly enjoyed a monopoly of the Egyptian silk industry, and whose scattered quarters are surrounded by cotton plantations.

Of all the towns of the delta, *Tantah*, capital of the province of Garbieh, occupies the most central position. It stands exactly midway between Cairo and Alexandria, as well as between the Rosetta and Damietta branches of the Nile. Here converge and intersect each other canals, roads, and highways. To these causes, combined with the great reputation enjoyed by the mosque of Seid-el-Radawi, the greatest saint of the Egyptian Mussulman calendar, is to be attributed the exceptional importance enjoyed by the annual fairs held at *Tantah*. In the eyes of the pilgrims the pool which receives the sweepings of the mosque possesses healing properties rivalling those of the Damietta column itself. In population, also, *Tantah* competes with Damietta for the third place amongst the cities of Egypt. Here is also the famous El-Ahmadi School, which, next to that of El-Azhar at Cairo, holds the first rank amongst all the Arab schools in the country. In the year 1877 it numbered as many as 4,885 scholars.

TERRANEH, SAÏS, FUAH.

On the Rosetta branch, which is skirted for half its course by a line of railway, itself flanked by the first swellings of the Libyan range, the only important town is that from which this channel takes its name. *Terraneh*, perhaps the ancient Terenuthis, is the chief depôt for the natron collected in the saline lake of the Wady-Natron, near the convent of Saint Macorius. *Térich*, which lies farther down, at the outlet of the narrow belt of cultivated lands here stretching between the hills and the left bank of the Nile, has also succeeded to an ancient city whose ruins are visible on the neighbouring Tell-el-Odameh, or "Bone Mound."

Kafr-el-Zaïat, where the railway between Cairo and Alexandria crosses the river on a long bridge of twelve arches, has no old Egyptian remains in its immediate neighbourhood. But about twelve miles farther down, on the same east side of the Rosetta branch, are situated the extensive ruins of *Sá*, the *Saïs* of the Greeks, and now called *Sa-el-Hagar* by the fellahin. *Sa*, which was the capital of Egypt at the time of the Persian invasion under Cambyzes, is perhaps one of those places which ought to be held in the greatest veneration by all mankind; for, according to the legend, from this city set out the colonists who founded Athens, bringing with them the image of the goddess Neith, who became the Athena of the Greeks and the Minerva of the Romans. From *Sa* also came the legendary Danaidæ, who first brought under cultivation the thankless soil of Argos, so different from their native plains enriched by the inundations of the Nile.

Of the old sanctuaries of *Saïs* little remains except heaps of refuse, and its tombs now yield to the treasure-seeker but few objects of interest. But its enclosure still excites surprise at its enormous proportions. It is no less than

82 feet high and 53 feet thick. The holy lake which formerly existed here is now a mere swamp.

Below *Dessuk*—where the river is spanned by an iron bridge, and whose fairs are only less frequented than those of Tintah—the pleasant town of *Fuah*, or “Madder,” occupies a position on the right bank, opposite the junction of the large navigable Mahmudieh Canal, which affords direct communication with Alexandria. *Fuah*, still noted for its numerous minarets, was the rival of Cairo in the fourteenth century; but it no longer cultivates the valuable plant from which it takes its name, and its industries are reduced to the manufacture of tarbushes.

ROSETTA.

At present *Fuah* has been eclipsed even by *Reshid*, or *Rosetta*, capital of the province, which lies on the left bank of the river about nine miles above its mouth. Founded by the Arabs in the ninth century, *Reshid*, like *Fuah*, had its period of prosperity. During the eighteenth century its port was the most frequented in Egypt, and vessels engaged in the coasting trade called here from every part of the Levant for cargoes of rice, which still forms the chief article of export.* The town is surrounded by delightful gardens, in the midst of which the remains of ancient structures have often been found. Almost every house in *Rosetta* is embellished with some fragment of columns, marble, porphyry, or granite, taken from older buildings. The famous “*Rosetta Stone*,” which, in the hands of Champollion and Young became the point of departure for discoveries of supreme importance in linguistics and history, was discovered in the year 1799 by the engineer Bouchard, of the French expedition under Bonaparte, at some distance to the north of the town, where now stands Fort Julian. This precious tri-lingual inscription, originally composed in honour of “*Ptolemy the Immortal, born of the sun*,” was ceded to the English by capitulation, and deposited in the British Museum.

When the Nile falls to its lowest level it occasionally happens that the tides ascend the stream to even beyond *Rosetta*, whose inhabitants are then obliged to use the brackish water found in the depressions. So bad is the supply of this indispensable article that in the year 1885 a commission was appointed to examine the question on the spot, and adopt measures for procuring a better supply for the town. Pending the completion of their labours the supply at *Edfeh* has been stopped, and the water is at present pumped higher up the Nile at *Kututbeh*, a point beyond the reach of the highest tides from the Mediterranean.

West of the *Rosetta* branch the whole north-west corner of the delta is watered

* Shipping of *Rosetta* in 1880 according to Amici:—

Arrivals	.	.	.	.	.	738 vessels of 20,124 tons.
Departures	.	.	.	.	.	726 „ 19,717 „
Total	.	.	.	.	.	1,464 „ 39,841 „

by canals derived from the main stream. Here the plains are irrigated by the Mariut, Abu-Dibat, Damanahur, and Metmudieh Canals, with innumerable smaller channels, all of which discharge their waters into Lakes Mariut and Edku.

DAMANAHUR—KAFR-DWAR.

Damanahur, consisting of a group of numerous hamlets, is the capital of this region of arable lands, where the tall chimneys of the cotton-cleansing factories almost outnumber the minarets of the mosques. Between Damanahur and Alexandria this part of the delta is connected with the seaboard by a narrow isthmus, where road, railway, and canal are all alike protected by embankments against the waters of Lakes Abukir and Mariut. This strip of land is one of "the gates of Egypt." Accordingly during the late military insurrection Arabi Pasha caused the approaches from this direction to be blocked from bank to bank by the *Kafr-Dwar* embankments. Instead of forcing these lines the English General Wolseley took them in flank and rear by suddenly embarking his forces and re-landing them at Ismailia on the Suez Canal, whence he advanced into the heart of Egypt by the opposite gate of the Wady-Tumilât. The success of this manœuvre was complete. The formidable *Kafr-Dwar* lines became useless, and Arabi was compelled hastily to withdraw his army to defend the approaches from the Suez Canal, this movement being followed by his crushing defeat at Tell-el-Kebir.

CANOPIS—ABUKIR.

North of the *Kafr-Dwar* isthmus Rosetta is connected with the peninsula of Alexandria by another belt of narrow land, which is also utilised by a line of railway, and which passes by the little dune-encircled town of *Edku*, or *Edkô*. At the outlet of Lake Abukir the Maadieh, that is to say, the ford or passage, indicates the course of the ancient Canopic branch of the Nile, the most westerly of all the seven fluvial ramifications. *Canopis*, whence this branch took its name, has left only some doubtful remains on a spot frequently washed by the surrounding waters. Throughout the whole of the maritime tract adjacent to the Maadieh ford, the sands have swallowed up the sites of ancient structures, which have also served to supply materials for building the neighbouring villages of *Mandarah*, *Abukir*, and others.

Abukir, situated on the shore of the bay to which it gives its name, probably on the very spot formerly occupied by the town of *Zephyrion* and the temple of Arsinoë Aphrodite, is a small but busy seaport, far better known, however, for its historic associations than for its local trade. It was in the *Abukir* waters that in the year 1798 Nelson destroyed the French fleet, thereby cutting off all communication between the conquerors of Egypt and the mother country. And although next year Bonaparte was still strong enough to annihilate a Turkish army which

had disembarked at this place, the fruits of Nelson's famous victory were soon after reaped by the total failure of the expedition, and the surrender of the French forces to the British after the battle of Alexandria.

ALEXANDRIA.

Alexandria, one of the great trading places of the world, and the second city of Egypt and the African continent in size and population, is also one of the most remarkable for the originality of its form. Its outline, however, has been greatly modified since the period when, some twenty-two centuries ago, the obscure town of *Rhacotis* received from the Macedonian conqueror the world-renowned name which it has borne ever since. At this point of the coast the rocky marine belt running in the direction from south-west to north-east has been broken by two wide breaches. Thus was created an island, under shelter of which the fleets of Phœnicians and Greeks formerly rode at anchor. Such was the famous island of *Pharos*, already mentioned in the Homeric poems.

When Dinocrates laid out the city of Alexandria on new lines, he did not dispose the temples and palaces along the continental coast-line, which here projected to a point in the direction of the island standing at a distance of over 1,500 yards from the mainland. But Ptolemy Soter, one of the first sovereigns of the Greek dynasty, bridged over the intervening space by means of the so-called "Seven Stadia Embankment," leaving two open channels of communication between the two harbours that were thus created. The channels have been gradually obliterated and the causeway enlarged, partly no doubt in consequence of marine deposits, but much more by the action of the Greek and Italian vessels, which throughout the whole of the Middle Ages were accustomed to discharge their ballast of stones in the Alexandrian waters.

At present the causeway has been transformed to a strip of land over 1,300 yards broad connecting the site of the ancient city with the north-east part of the former island of *Pharos*. Here is now situated the "Turkish quarter," a labyrinth of irregular and winding lanes, pierced here and there by a few broad modern thoroughfares. The island thus changed to a peninsula has itself become covered with streets, houses, barracks, depôts, palaces, and buildings of all sorts. At its south-western extremity stands the lofty tower of the modern lighthouse, the successor of the famous "*Pharos*" of Ptolemy Philadelphus, a monument of white marble in the form of a step pyramid, which originally stood at the opposite end of the island, and which was regarded by the ancients as one of the "seven wonders" of the world. Masudi, who saw the ruins of this structure, says that in his time it was still "four hundred cubits high," and according to Mahmud Bey it rose to an elevation of over 400 feet. No vestiges are now visible of the lighthouse, whose very site has been washed away by the marine waters. Nor has the neighbouring fort which bears its name even been constructed with the materials of a monument whose name alone survives as the common designation of all lighthouses throughout the Greek and Latin seafaring communities.

While the alluvia brought by the marine currents were developing the isthmus of the "Heptastadium," which was further enlarged and elevated by the ruins of a city more than once destroyed and rebuilt, the other parts of the neighbouring

Fig. 133.—ABUKIR AND ALEXANDRIA.

Scale 1 : 850,000.



seaboard appear to have undergone the opposite movement of subsidence during the same historic period. Roads, quays, old quarries, tombs excavated in the cliffs along the adjacent coast, as well as the works known by the name of "Cleopatra's Baths," are still constantly encroached upon by the marine waters, even

when they are at their lowest level. In spite of the extensive operations carried out by the engineers employed by Mohammed Ali, it was found impossible to drain Lake Mariut, which the English had created in 1801 by opening three or four channels in the intervening strip of coast skirting the west side of Lake Abukir.

It required sixty-six days to flood this depression, which in certain places has a present depth of seven feet. It will certainly prove an arduous undertaking to recover for agriculture a district 150,000 acres in extent, lacustrine in its lowest parts, swampy round its margin, where 150 villages are said to have stood before the irruption of the waters which converted Alexandria into an insular city. After the marine floods have been drained off it will be necessary to get rid of the excessive saline particles by drenching all the depressions of the basin with fresh water drawn from the Mahmudieh Canal. At the time of Strabo the Mareotis vineyards yielded one of the choicest wines throughout the whole of the Mediterranean seaboard. In this lake a port had been excavated for shipping all the produce brought down by the Nilotic canals from the interior of the country. At present the basin is no longer available for navigation, and the Mahmudieh Canal, instead of discharging into it, skirts its shores between two embankments.

The "European City," stretching west and south of the Turkish quarter, occupies very nearly the exact site of the city built by Dinocrates and the Ptolemies. Its broad straight streets form a regular and compact mass of buildings, merging towards the north-east in some modern suburbs, whose chief thoroughfare is the old Canopic highway leading direct to Rosetta. But within the limits of the modern city no traces are any longer visible of its ancient predecessor. All that still survived at the close of the last century, when the population had dwindled to scarcely more than six thousand souls, has been demolished by the builders of the new quarters that have since sprung up, since the revival of its former prosperity. A few fragments of sculptures have alone been rescued and preserved in public or private collections. The site of the Soma, the magnificent tomb of Alexander, and the position of the famous observatory, associated with the illustrious names of Eratosthenes, Hipparchus, and Ptolemy the geographer, are subjects of discussion among archæologists. The traces are vainly sought of the no less renowned museum and library, where Euclid and Erasistratus taught, which were frequented by Theocritus, Aratus, Callimachus, and Lucian, and where had been accumulated as many as seven hundred thousand volumes, all consumed during the wars of Cæsar in Egypt.

Another equally famous library stood near the Temple of Serapis, beyond the limits of the present city. But it is matter of history how the fanatical Egyptian monks, armed with the edict issued by the Emperor Theodosius, proceeded in Alexandria and throughout the whole of Egypt to systematically destroy the temples, overthrow the statues, and commit to the flames all the papyri and treasures of art inherited from the remotest antiquity. Thus perished the library, in which had been carefully collected all the masterpieces of Hellenic science and poetry.

"At that time," writes the eloquent historian of the Decline and Fall of the Roman Empire, "the archiepiscopal throne of Alexandria was filled by Theophilus, the perpetual enemy of peace and virtue; a bold, bad man, whose hands were alternately polluted with gold and with blood. His pious indignation was excited by the honours of Serapis; and the insults which he offered to an ancient chapel of Bacchus convinced the pagans that he meditated a more important and dangerous enterprise. In the tumultuous capital of Egypt the slightest provocation was sufficient to inflame a civil war. The votaries of Serapis rose in arms at the instigation of the philosopher Olympius, who exhorted them to die in the

Fig. 134.—ALEXANDRIA.

Scale 1 : 75,000.



defence of the altars of the gods. These pagan fanatics fortified themselves in the temple of Serapis, repelled the besiegers by daring sallies and a resolute defence, and by the inhuman cruelties which they exercised on their Christian prisoners obtained the last consolation of despair. The efforts of the prudent magistrate were usefully exerted for the establishment of a truce till the answer of Theodosius should determine the fate of Serapis. But when a sentence of destruction against the idols of Alexandria was pronounced, the Christians set up a shout of joy and exultation, whilst the unfortunate pagans retired with hasty and silent steps, and eluded by flight or obscurity the resentment of their enemies. Theophilus

proceeded to demolish the temple of Serapis without any other difficulty than those which he found in the weight and solidity of the materials. But these objects proved so insuperable, that he was obliged to leave the foundations, and to content himself to reduce the edifice itself to a heap of rubbish, a part of which was soon afterwards cleared away to make room for a church in honour of the Christian martyrs. The valuable library of Alexandria was pillaged and destroyed, and near twenty years afterwards the appearance of the empty shelves excited the regret and indignation of every spectator whose mind was not totally darkened by religious prejudice. The colossal statue of Serapis was involved in the ruin of his temple and religion."

On the eminence where the Serapeum has left nothing but a shapeless heap of débris, a solitary pillar about 100 feet high still stands like a monument of death amid the surrounding decay. This is the pillar popularly known as "Pompey's Column," although if not actually built, it was certainly restored in honour of the Roman Emperor Diocletian. Originally it may probably have formed part of the Serapeum. The capital has been hollowed out, either to receive the pedestal of some statue, or possibly in early Christian times to serve as an aerial chamber for some Egyptian rival of Simon Stylites.

Near the beach to the north-west of the city, the proximity of ancient ruins was till lately indicated by an obelisk of pink granite usually known as "Cleopatra's Needle," although it was originally brought from Heliopolis and re-erected in Alexandria during the reign of Augustus, consequently some time subsequent to the death of the Egyptian queen. A few years ago it was again transported, this time to London, where it now adorns the new granite embankment on the left side of the Thames. Another "needle," after lying for some generations half buried in the sands, has been removed to the New World, ambitious to have her share in the spoils of Egypt. Presented by the Egyptian Government to the municipality of New York, it has been set up in the Central Park of that city.

The equestrian statue of Mohammed Ali, standing on the elongated "Consul's Square" in the heart of the European quarter, is a sorry compensation for all the works of art wantonly destroyed in past times. The city was even again threatened with destruction during its bombardment by the English in the year 1882. On this occasion Fort Cafarelli was demolished by the British guns, and after the attack the work of destruction was continued during the night by incendiaries and plunderers, instigated by Mahomedan fanaticism. Even two years after the catastrophe some of the best-built and wealthiest quarters still presented a lamentable appearance. Enormous heaps of rough stonework, the remains of ruined houses, lined both sides of the streets, where every gust of wind raised dense clouds of lime-dust. In many places where the work of destruction had been complete, the district presented the aspect rather of a quarry than of an inhabited town. The work of restoration was long delayed by the state of uncertainty prevailing amongst the mercantile classes, and by the ruin of so many owners of house property, who had long to wait for the promised indemnities. The flags of the



GENERAL VIEW OF ALEXANDRIA.

footpaths and the paving-stones used in the streets of the better-built quarters are imported from Europe.

The Egyptian Institute, the principal scientific establishment in the Nile Valley, has been founded, not in Cairo, but in Alexandria, as if the intention has been to

Fig. 135.—ALEXANDRIA AND LAKE MARIUT.

Scale 1 : 250,000.



revive the old traditions of the place as a famous seat of learning. It could never be forgotten that this city was formerly the "brain of mankind," and that here the great school of Alexandria has been established and conducted by such men as Plotinus, Proclus, Porphyrius, and Jamblichus. Thanks to the influence of this university, there was brought about that blending of national myths and that inter-

change of ideas between the Eastern and Western worlds, between India, Greece, and Egypt, out of which arose the modern philosophies and religions.

Nevertheless, Alexandria has failed to revive its past glories as a centre of the sciences and letters. At present it is essentially an emporium of commerce. More than one-third of all the Egyptian exchanges with the rest of the world are effected in this seaport, which before the opening of the Suez Canal enjoyed a monopoly of the export and import traffic with the West. In 1866, the year of its greatest prosperity, caused by the effects of the American Civil War on the cotton trade of the world, its exports rose to nearly £20,000,000. The north-east harbour, wrongly called the "New Port," although no improvements have been executed here, is very shallow, and frequented only by small coasting craft. During the last century vessels of this class owned by Christians were compelled to cast anchor in this harbour.

The south-east, or "Old Port," the Eunostos, or "Haven of Welcome" of the ancients, is alone available for vessels of heavy draught. Unfortunately it is of difficult access, the channels being tortuous and obstructed by reefs, amongst which large ships cannot venture without a pilot. In rough weather even light craft are not free from the risk of running aground. But inside the pier, which forms a south-westerly prolongation of the coast-line from the peninsula of Pharos, shipping of every description finds complete shelter and ample space to ride at anchor. There is altogether a water surface of no less than 1,000 acres, with a normal depth of from 28 to 33 feet.

The Mahmudieh Canal, which has its outlet in this port, should and occasionally does serve, jointly with the railway, as a highway of communication between Alexandria and the Nile Valley. But notwithstanding its foul condition, the water of this canal is utilised chiefly to supply the inhabitants of this seaport, and to irrigate the surrounding plains. At times the canal has been completely exhausted, leaving the boats frequenting it landed high and dry on its muddy banks.

The local industries contribute but little to the general trade of the place. The chief articles here manufactured are silk and cotton woven goods, reed and palm matting, essences and perfumery.

RAMLEH—MEKS—MUDAR.

Like all other great cities, Alexandria has its complement of suburban residences, environs, and pleasure-grounds. Along the canal and fortifications stretching southwards the country seats enjoy the shade of avenues of palms, clusters of bananas, mimosas, and other tropical plants. Towards the north-east *Nicopolis*, built by Augustus to commemorate the battle of Actium, has been replaced by the modern town of *Ramleh*, or "The Sands." During the last century little more than a shifting dune, Ramleh has now become an extensive aggregation of palaces, country residences, villas, hotels, houses in every form and style of architecture, painted in every hue, and scattered without order along the beach or within view of the sea.

Southwards stands the château of *Meks*, at a point of the coast-line where it

commands at once the shore, **Lake Mariut**, and the port of Alexandria. From the limestone rocks of this coast have been obtained the materials for the construction of the great city, the piers, and breakwaters of its harbour. Beyond Meks nothing occurs except groups of huts, fishing hamlets, and the remains of ancient cities. In this direction the wilderness begins where the din from the busy seaport is no longer heard.

West of the swamps and coast-line of Meks, the ancient city of *Taposiris* is still recalled by the modern village of *Abusir*. Beyond this point ranges of hills, detached sections of the plateau which stretches southwards in the direction of the Siwah oasis, follow at intervals along the sea-coast. Here the two headlands known to the ancients by the name of Katabathmus are less than 830 feet high. The village of *Mudar* is the only collection of houses on this now almost uninhabited coast, which was formerly strewn with many towns, and which extends westwards as far as Cyrenaica. Mudar is the halting-place for caravans journeying between Alexandria and the Siwah oasis.

NAUCRATIS.

On the Canopic branch of the Nile stood the ancient city of *Naucratis*, the first Greek settlement in Egypt, originally founded by a colony from Miletus, during the reign of Amasis. Being the only place in the country where the Greeks were permitted to carry on a regular trade with the natives, Naucratis soon acquired great importance, and for a time became a chief centre of Hellenic culture in the delta. But after the foundation of Alexandria, its fame was eclipsed by the metropolis of the Ptolemies; it lapsed into obscurity, and for many ages its very site was unknown. Recently, however, Mr. Petrie has discovered some ruins and archæological remains at a spot which has been identified by Egyptologists as the site of the famous Hellenic emporium. A selection of pottery and other antiquities has already been forwarded to England by the Egypt Exploration Fund, and deposited in the Bronze Room of the British Museum. "The fragments of vases," writes Mr. Reginald Stuart Poole, "range through at least three hundred years, and from the geographical position of the settlement form a most valuable commentary on the vases of Rhodes, especially Kamiros, and on the early art of Ionia.

"These specimens, fragmentary though they are, give us most interesting examples of each class. On the oldest the design is painted on a pale yellow ground. Similar fragments were found by Mr. Wood in the earliest stratum of remains under the temple of Diana at Ephesus. The specimens with figures and animals in crimson and other colours on a pale ground are very similar to early vases of Kamiros and Ialysos in Rhodes, of which there is a fine series in the First Vase Room. The subjects are very varied, animals and the lotus-pattern predominating, with occasionally the human figure. These are followed by the successive archaic styles and the work of the best period.

"Taken in connexion with the archaic fictile ware, a most interesting find is a large fragment of the shell called *Tridachna squamosa*, on which are incised patterns

of an Asiatic origin. We know that the shell is not found in the Mediterranean, but belongs to the fauna of the Red Sea and the Indian Ocean. Specimens of it, similarly ornamented, have been found in Assyria, in Palestine, in Rhodes, and at Canino in Etruria. The discovery of a fragment at Naucratis adds one more link to the chain, and we can hardly resist the conclusion that all these shells were imported by the Phœnicians by the trade-routes of the Red Sea, and afterwards formed objects of barter in their traffic with the Greeks and Etruscans at least as early as 600 B.C., or even earlier.

"Next in order of interest are the figures in limestone, alabaster, and terra-cotta, some recalling Rhodes or Cyprus, others purely Greek, others again Græco-Egyptian. Among the most noteworthy is a very beautiful headless figure of a girl, ornamented with flower-wreaths, which reminds us that the weaving of garlands was a well-known craft of Naucratis. It is hard to assign this work to a purely Egyptian or Greek origin. The age is probably about 500 B.C., and, but for the modelling of the bust, it might be assigned to the Saïte school. On the other hand, in spite of a somewhat Greek treatment, there is nothing Greek which absolutely recalls it. We have here, as in the earlier fictile ware of Naucratis, an intermediate style, such as that already recognised in the vases of Kamiros, but in this case distinctly under Egyptian influence. The stamped handles of diotæ are selections from a great series, surely indicating the trade-routes of this Greek emporium, while the Athenian tetradrachms equally witness to the intercourse with Greece.

"These discoveries clearly point to commercial relations at a very early age with Miletus and other cities on the west coast of Asia Minor, and with the neighbouring islands, and confirm in the most striking manner the accounts we have from Herodotus and other ancient authors, of the establishment of Naucratis under the Saïte kings as an emporium and centre of Hellenic trade. It is partly to the liberality of the Society for the Promotion of Hellenic Studies that the results at Naucratis are due, the work having been aided by a grant made by them for excavations on this site." *

AGRICULTURE.

Egypt still derives its resources almost exclusively from its agriculture, as in the olden times when lean kine and fat kine were the respective symbolic representations of the misery or prosperity of the land. The alluvial soil, which has an average depth of about 32 feet, might be rendered extremely productive. But its exhausted strength requires to be restored by manure, and in many places it becomes saturated with saline and nitrous particles, unless regularly washed by copious inundations.

On the whole the cultivation of the land is still in a rudimentary condition. The badly harvested wheat crop of the Nile Valley is always largely mixed with clay, and so saturated with salt that it is very difficult to keep. Almost as soon as

it is gathered into the granaries it becomes a prey to weevil. The linseed also contains foreign grains in the proportion of one-fifth; the indigo is parched and earthy; the opium adulterated with lettuce-juice; the cotton fibre mixed with all kinds of impurities.

The fields cultivated by the peasantry grow scarcely any large plants except palms, while the products of the European fruit-trees are usually of very indifferent quality. The tree valued beyond all others is still the date-palm, each plant of which yields an average yearly revenue of about sixteen shillings.*

The domestic animals are badly cared for, nor have the Egyptian stock-breeders any right to boast of their really splendid breeds of asses, especially the large white variety, which appear to have come originally from Yemen.

Wheat, barley, durrah, lentils, peas, haricots, lupins, saffron, clover, hemp, the poppy, melons, and divers kinds of vegetables, are cultivated in all the small holdings of the fellahin, while other plants unknown to the ancient Egyptians have also been introduced into the annual rotations of crops. Such are indigo, tobacco, maize, rice, the sugar-cane, mulberry, and cotton plant. Progress has shown itself especially by the great change that has taken place in the method of cultivation. To the plants grown in past times there have been added many others; artificial irrigation also now supplements that of the periodical inundations, while steam ploughs have in many districts replaced the primitive implements, such as we see figured on the bas-reliefs of the ancient tombs. The pointed sticks by which the surface is scratched rather than ploughed in Dar-För, have also everywhere disappeared in Egypt, except in the neighbourhood of Kom-Ombo.

In good years the cereal crops amount altogether to from 4,000,000 to 5,000,000 quarters, of which about 2,000,000 are wheat, 1,250,000 barley, 1,750,000 maize. Rice and lentils are also exported in considerable quantities. The sugar-cane is cultivated especially in Upper Egypt and in the Fayum, on the large estates of the State and industrial companies. The great capital required for the establishment of factories and "smoking obelisks" necessarily prevent small holders from engaging in this industry.†

Cotton, however, has been introduced on the farms of the peasantry, thanks to the Greek agents, who buy up the raw material and prepare it for the market in their small jinning mills. But no foreign hands are ever found working jointly with the natives. The low price of manual labour must always prevent European agricultural settlements from being established in Egypt. Immigrants from the West can find a footing only in the large towns. Introduced into Egypt during the government of Mohammed Ali, largely through the efforts of the Frenchman Jumel, the cotton plant has gradually acquired, under the name of *mako*, a certain importance in the export trade of Egypt. When the usual supplies of raw cotton were suddenly arrested by the outbreak of the war of Secession in the United States, all the efforts of the Egyptian cultivators were directed towards the production of this valuable commodity, vast quantities of which were then exported from Alexandria.

* Date-trees of Egypt in 1875, 5,000,000; annual yield, 100,000 to 120,000 tons of fruit.

† Sugar plantations in 1880, 38,000 acres; yield, 46,750 tons; value of the crop, £935,000.

But after a short period of unexampled prosperity, the inevitable reaction set in, accompanied by wholesale failures and commercial ruin. The cultivation of the cotton plant ceased to encroach on the lands under cereal crops; nevertheless, it has continued to hold the foremost rank for the annual value of its yield. Even the cotton seed, of which no use was formerly made, has acquired very considerable economic importance. The oil extracted from it by powerful machinery is not only utilised by the peasantry in the preparation of their food, but is also employed to adulterate the "olive oil" consumed especially in the south of Europe. The mills of Douvres alone import whole cargoes for the fabrication of these oils, used partly for alimentary purposes, partly in the manufacture of soap.

At the beginning of the present century the scientific explorers who accompanied the French expedition under Bonaparte estimated at about 10,000 square miles the total area of the arable lands in Egypt. Since then the space under cultivation has been increased by, perhaps, one-fifth, thanks to the development of the network of irrigating canals. But over one-third of the delta still remains to be reclaimed, either by draining the marshy tracts or by effecting improvements in the present irrigation system. Nearly the whole of the coastlands extending from Lake Mariut to Lake Menzaleh are occupied by stagnant, brackish, and even saline waters. Amid the swamps stand bare sandy dunes, and along the edge of the lakes from the Arabian to the Libyan desert there stretches a zone of territory with an average breadth of from 18 to 20 miles, the so-called Berari, whose surface, lying almost flush with the surrounding waters, has been brought under cultivation only at a few isolated points.

The present state of this region of the delta is somewhat analogous to that of the Camargue in France, although the remains of cities scattered over the rising grounds are sufficient proof that there was a time when these now abandoned lands supported a numerous population of agriculturists. In the midst of the sands along the sea-coast the explorer is surprised still to meet at certain points groups of houses surrounded by date-trees, vineyards, and fruit-gardens. Hence it is obviously possible to bring the sands themselves under cultivation, although the process certainly proves very laborious. The sand has to be dug sufficiently deep to enable the roots of the plants to reach the necessary moisture; at the same time care must be taken not to penetrate too far, which would have the effect of causing the vegetable fibre to rot. The holes have also to be surrounded by hoardings, in order to prevent them from getting choked by the sands of the shifting dunes. The ground so prepared yields pistachios, figs, and all kinds of fruits of better quality than those grown in any other part of Egypt.

It is noteworthy that the sandy tracts about the mouth of the Guadalquivir are brought under cultivation much in the same way. Hence it has been suggested that immigrants from Egypt may probably have taught the natives of Andalusia to reclaim their so-called "navasos" by this process.

changeless in its forms, and a new Egypt brought within the influence of the restless and ever-progressive European world. The chief industry dating from the oldest times is that of pottery, the raw material for which is always supplied in abundance by the mud of the Nile and surrounding wadies. Along the banks of the main stream whole houses are met built entirely of earthenware, which here so often replaces the ordinary brickwork.*

The so-called bardaks, or water-jars, produced in large quantities especially at Kenh in Upper Egypt, are noteworthy both for the variety and elegance of their forms and for their serviceable character. Many are charged with a delicate and durable perfume, while all are made more or less permeable to water. They thus act partly as filters, partly as coolers, keeping the fluid fresh even in the hottest weather by the process of evaporation. The transport of these vessels to Cairo is effected in an ingenious and inexpensive way. Large numbers joined loosely together with their mouths downwards form perfectly buoyant rafts of convenient shape, which by the aid of two or three boatmen are safely floated down the Nile to the head of the delta.

The industries introduced by the Arabs are the same as those that have been developed in all other Mussulman lands—saddlery, carpet-weaving, leather-work, copper-work, damascening, gold and silver work. The iron and hardware trades are unimportant, and all utensils and implements of all sorts made of this metal are imported from Europe. Egypt has no iron mines, and in early times the only iron ores known to her were those of meteoric origin. The very expression "celestial substance," employed to designate iron, seems to show that the ancient Egyptians represented the firmament as a metallic vault, some fragments of which occasionally broke away and fell on the surface of the earth.†

TRADE—RAILWAYS AND TELEGRAPHS.

In the direction of the surrounding deserts, the valley of the Nile is still restricted in its commercial relations to the periodical despatch of caravans, which do not return for some months, and occasionally even for a whole year, from the interior of the continent. But the main stream itself is navigated by steam as well as sailing vessels, while the inhabited districts are traversed in all directions by the locomotive. By steam most of the pilgrims now make the journey to the port of Mecca and back.‡

In proportion to its superficial extent, but not to the density of its population, the Nile delta is one of those regions in which the railway system has been most fully developed. Besides this means of communication, over 600 miles of canals, exclusive of the two great branches of the Nile, are open to navigation throughout the year, and during the inundations the navigable arteries are at least three times longer.

* G. Rohlf, "Drei Monate in der Libyschen Wüste."

† Fr. Lenormant, "Premières Civilisations."

‡ Egyptian steamers on the Nile, 40; Egyptian steamers on the Red Sea and Mediterranean, 16; total of the commercial fleet, 1,500 vessels; boats and other river craft, 10,300.

From the head of the delta the network of railways is continued along the right bank of the Nile southwards to Siut. For the purpose of forwarding troops, and other military purposes, the late Khedive had also caused other lines to be constructed still farther south, which at one time the English intended to carry as far as Dongola. All the sugar plantations, both in Upper Egypt and in the delta, have also their special system of narrow-gauge lines connected with the general network. Amongst the projected lines there are several which, when carried out, will place the whole of the Nile Valley in direct railway communication with the ports of the Red Sea.

The telegraph has preceded the locomotive in every direction, and a few years

Fig. 136.—EGYPTIAN RAILWAYS.

Scale 1 : 6,000,000.



ago had already been extended across the desert southwards to the equatorial regions. But the small number of private messages, as well as the low proportion of postal correspondence, less than one letter per head of the population, shows that, apart from the Government officials, little use is made of these means of correspondence except by Europeans and other strangers domiciled in Egypt.

Speaking generally, the trade of Egypt is relatively more developed than that of several European countries. Calculated by the number of inhabitants, it amounts to nearly half the commerce of France, while even exceeding it in the relative movement of the shipping in the ports of the Mediterranean and Red Sea. Even before taking possession of the country, England held the first position in this respect, about forty-five per cent. of the gross tonnage of all vessels frequenting

the Egyptian ports flying the British flag. The next in importance are Austria and France, both ranking before Egypt herself, whose flag covers little more than nine per cent. of local traffic.

PUBLIC INSTRUCTION.

Of late years education has received a considerable impulse, although most of the Mussulman schools are still mere *kuttábs* attached to the mosques, and in which instruction is limited to reading and writing and the recitation of passages from the Koran. Besides the primary establishments there are several high schools, in which, as in the University of El-Azhar, courses of mathematics and jurisprudence are added to the general curriculum.

Since the time of Mohammed Ali elementary schools on the European model were founded in some of the large towns, but most of these establishments have been closed and replaced by institutions opened or supported by the various European colonies and religious communities. The Egyptian Government has also endeavoured to keep pace with the European States by founding higher and special schools for secondary instruction. Moreover, there are at Cairo a medical college, a polytechnic establishment, and other schools specially devoted to the teaching of law, the mechanical arts, languages, mensuration, and similar branches of practical knowledge. Nevertheless, most young men anxious to prosecute their studies in the higher departments of science, generally prefer to finish their course in the European colleges.

Of modern European languages French is the most widely diffused in Egypt; but, under the new administration, the budget of public instruction has undergone retrenchment, especially at the cost of the French teachers and professors. This step would seem to have been adopted for the purpose of sooner or later excluding the French language altogether from the civil and military educational establishments of the country.

GOVERNMENT.

The government of Egypt still practically remains what it has ever been—almost a pure despotism. According to the accepted political tradition, the only right enjoyed by the mass of the people is that of paying the imposts and obeying the law; but, by a singular complication, caused by the action of a thousand foreign intrigues and rivalries, the Egyptians themselves scarcely know whom to regard as their true masters. Hence they have nothing to do except resign themselves to a situation from which there is no escape, repeating the while the old Arab saying, “The people are like the grain of sesame, which is ground so long as it yields oil.” *

Officially, the ruler of Egypt is a prince of the family of Mohammed Ali, bearing the title of Khedive, which implies a rank somewhat intermediate between

* Heinrich Stephan, “Das heutige Ägypten.”

those of viceroy and sovereign. The legal sovereign is still the Sultan of Constantinople, in whose name the imposts are levied, and whose monogram is stamped on the native currency. The padishaw continues to receive a yearly tribute of £700,000, just as if the present intervention of Great Britain had not effaced the last vestige of his authority. He also derives an income of from £280,000 to £320,000 from the monopoly secured to the import trade of Turkish tobacco. Nevertheless, at least three-fourths of the tobacco consumed in the country is introduced by an organised system of smuggling, especially across the frontier of the desert towards Palestine.

Till recently the official language was Turkish, not Arabic, which is nevertheless the mother tongue of nearly all the native inhabitants of Egypt.

But the political power has passed from the hands of the Sultan, and is now practically exercised by the Christian states of Europe. A few years ago the *Condominium* was jointly exercised by England and France. Their agents controlled the finances, which they disposed of at their pleasure, thereby substituting their own authority for that of the Khedive. The European nations were also more powerful in Egypt than the local Government, in virtue of the consular tribunals, which, in the terms of the "Capitulations," claimed exclusive jurisdiction in all matters of dispute in which both Europeans and natives were concerned. But the *Condominium* has lapsed, and Great Britain alone exercises the control ever since the military revolt under Arabi Pasha—a revolt which, although made to the war-cry of "Egypt for the Egyptians," would, if successful, have resulted in handing over the country to new Mameluks of native origin no less oppressive and extortionate than the former Mameluks of foreign race—Arabs, Circassians, Armenians, Sudanese, and others.

The ministers appointed by England decide the most important questions in accordance with her decrees, without even taking the trouble to consult the official sovereign. His function seems to be simply to attach his signature to all state documents. In return for this service he retains his nominal rank and personal revenues, but he no longer possesses even the privilege of putting an end by abdication to his present somewhat ignoble position.

FINANCE—ARMY AND NAVY.

The political situation of Egypt is all the more strained and bewildering that the English, while exercising sovereign rights, omit no opportunity of asserting their set purpose to quit the land at no distant date, and restore to the Egyptians the autonomy they had so long forfeited to the stranger. At the same time their deeds themselves speak another language. British subjects, even Anglo-Hindus, Christians and Mussulmans alike, flock in hundreds to the Nile Valley, where they are installed in the places of emolument withdrawn from the native and non-British foreign officials. The public revenues formerly set apart to meet the claims of money-lenders at high interest are now applied in the first instance to pay the salaries of these new functionaries. They are also to some extent made available to

defray the costs of the British military occupation, although to meet these heavy charges it has also been found necessary to draw upon the revenues of the home country. The conveyance of the Queen's troops to Sudan, including provisions and supplies of all sorts, has been estimated to amount to at least £1,000 per head.

In spite of the official budgets, which at the beginning of each financial year show a balance in favour of the treasury, the Government has for some time been hopelessly drifting to a state of absolute bankruptcy. In fact, payments would have been already suspended but for the loan of £8,000,000 sanctioned by the British Parliament and guaranteed by the European powers in the year 1885. The lowest rate of interest on the advance made by foreign bankers and capitalists since 1870 is $12\frac{1}{2}$ per cent. ; but numerous debts have been contracted at even double that heavy rate of interest.* Thus it has come to pass that within the short space of ten years the Egyptian people, who still supposed their masters to be the wealthiest in the world, found themselves saddled with a debt of nearly £120,000,000, or in the proportion of over £80 per family.

The Egyptian army, composed of about 3,000 men, or scarcely more than one-fifth of its former strength, has been reduced to the position of a mere police force, and the question of its complete suppression has even been discussed. Meanwhile the conscription, without being officially abolished, has fallen into abeyance.

All the military service is now being performed by the British troops, which towards the end of the year 1884 numbered over 13,500 men, and which in the spring of the next year had been raised to a total effective strength of nearly 25,000 for the whole of Egypt and the Sudan. Special constables have even been introduced from England, while the local constabulary is completely under the control of the British authorities.

The fleet comprises officially about a dozen steamers, manned by perhaps 2,000 hands.

FUTURE PROSPECTS.

Certainly the Egyptian people would not be justified in placing too much reliance on the promises held out to it of political independence. Although, like most other modern nations, it has also its constitution drawn up in a charter of forty-nine articles, it elects no representatives, nor is it consulted in any way on political matters. The Assembly of Delegates, which was annually convoked under the government of Ismail in order to take into consideration the financial situation of the current year, has ceased to meet as a deliberative body. Nevertheless, there can be no doubt that the national sentiment is being gradually but steadily developed in Egypt, although the country has forcibly become an integral part of the European world, and although the European powers are continually interfering more and more in its internal affairs. At the same time these very powers will have henceforth to reckon not only with the European element settled in the Nile

* MacCoan, "Egypt as it is."

Valley, but also with the native population itself, which is being brought daily more under the influence of modern ideas. The time is probably approaching when the cry of "Egypt for the Egyptians," already raised under unhappy auspices, will again be heard in a way to command the respect and consideration of European statesmen.

RELIGIOUS ORGANISATION.

For the Egyptian Mahommedan world the chief dignitary of the Mussulman religion is still the Sheikh-el-Islam of Constantinople. Hence, in modifying the laws of the country without first obtaining the sanction of this spiritual head of the faithful, the British Government has shown a complete disregard and indifference to the most hallowed traditions of the land. In Egypt itself the chief religious authority is centred in the corporate body of doctors attached to the University of El-Azhar in Cairo.

The "Jacobite" or National Church of the Coptic Christians is governed by the Patriarch of Alexandria, who, notwithstanding his official title, also resides permanently in Cairo. Like the patriarchs of the orthodox Greek Church, he is chosen not from the active clergy, but from amongst those leading a monastic life. The priests themselves never take orders until they are married, but the principle of celibacy is so far recognised that once become widowers they cannot contract a second marriage. For analogous reasons, marriage with the widows of priests, henceforth vowed to the Church, are also forbidden to all the faithful. The small section of the Coptic Christians who recognise the spiritual headship of the Roman pontiff have no national patriarch, but are governed by a bishop always consecrated in Rome.

ADMINISTRATIVE DIVISIONS.

For administrative purposes Egypt is divided into *mudirieh*, or provinces, governed by a *mudir*, or prefect, who takes the title of *mohafez* in those provinces which consist only of a large city and its suburban district. The *mudirieh* are in their turn divided into *markaz* or *kism*, administered by officials bearing the title of *nazir*, and these again into districts of the third rank known by diverse names, corresponding to our circuits, cantons, parishes, and the like.

The mudirs, or chief governors, administer their respective provinces in the combined capacity of civil prefects, receivers of the revenues, and military commanders. All the other provincial authorities are placed under the direct jurisdiction of these mudirs, who, however, discharge most of their multifarious functions by means of a *rekil*, or lieutenant, and with the aid of the notaries who form their *dican* or private council. The *karas* and the bodies of police placed at their disposal are charged with the maintenance of order amongst the fellahin or peasantry of the rural districts. This duty is usually attended by little difficulty, thanks to the naturally peaceful disposition of the inhabitants of Egypt, always ready to yield

obedience to the orders of the authorities. Nevertheless the recent years of civil war and foreign invasion have given rise to many local disturbances. Bands of marauders have made their appearance in the plains of the delta; and for the first time for many generations the unwonted spectacle has been witnessed of villages attacked and plundered by brigands.

The number of paid functionaries is estimated at no less than 21,000, amongst whom as many as 1,280 were Europeans of all nations in the year 1882. But besides these there are numerous rural dignitaries, whose salaries are drawn directly from the products of the imposts. The large landed proprietors are the true masters of the villages standing on their estates. Thus it may happen that a single person may be at once the *omdeh* of a whole district; that is to say, the official whose will is absolute in all matters connected with the levying of taxes, and with the *corvée* or forced labour service required for the maintenance of the irrigation works. In the same way in the *teftish* belonging to the domains of the Khedive and the members of his family, for whom are now substituted the employés of the European bankers, the administration of affairs is in the hands of the representatives of the territorial lord.

In other villages the functions of mayor are exercised by the sheikh-el-beled, or "district chiefs," each of whom has jurisdiction over a group of families. Some villages have but one, others several, and even as many as twenty of these rural headmen. In theory they are elected by the community; but as a rule their authority is transmitted from father to eldest son, or else within the same family circle by seniority from father to brother, or from father to son or nephew. In certain remote districts, and especially in the Berari of the delta, the sheikh-el-beled are absolute masters—so many "petty kings," against whose decisions there is no appeal.



APPENDIX I.

STATISTICAL TABLES.

AFRICA.

Area, according to Behm and Wagner	11,930,000 sq. miles.
Estimated population (1882)	205,825,000
Total foreign trade, about	£40,000,000
Approximate area of the Nile Basin	1,340,000 sq. miles.
" " Congo "	1,280,000 "

EQUATORIAL LAKE REGION.

Approximate area	172,000 sq. miles.
Population (1885)	12,000,000
Area of Lake Victoria Nyanza	26,500 sq. miles.

KINGDOM OF KARAGWE.

Area	6,000 sq. miles.
Population	350,000 (?)
Chief Town, Warahanje.	

KINGDOM OF U-GANDA.

Area	20,000 sq. miles.
Area with dependencies	70,000 "
Population	2,775,000
Population, with dependencies	5,000,000
Chief Town, Rubaga.	

ZERIBA REGION.*

Estimated area	140,000 sq. miles.
Approximate population	10,000,000

* That is, the whole region between the Bahr-el-Jebel and Bahr-el-Arab, watered by the numerous streams flowing to the left bank of the Upper Nile between Lake Albert Nyanza and the Sobat confluence.

SOBAT AND YAL BASINS.

Estimated area	60,000 sq. miles.
Population	3,000,000 (F)

ABYSSINIA AND SHOA.

	Area in sq. miles.	Population.
Abyssinia proper (Tigré, Amhara, Gojam, &c.)	80,000	2,000,000
Shoa	16,000	1,500,000
Territory of the Bogos, Mensas, Beni-Amer, &c.	28,000	100,000
Massawah and Shoho territory	10,000	50,000
Territory of the Afars (Danakil), Obok, and Assab	40,000	200,000
Territory of the Issa and other dependent Somali tribes	6,000	60,000
Harrar and neighbouring districts	8,000	1,200,000
Galla States of Southern Abyssinia	64,000	3,500,000
Total, Abyssinia and dependencies	252,000	8,610,000

ADMINISTRATIVE DIVISIONS OF ABYSSINIA.

Governments.	Provinces.	Fluvial Basins.	Climatic Zones.	Towns.
AMHARA . . .	Dembea	Blue Nile	Dega, Voïna-dega . . .	Gondar
	Chelga	„ Atbara	„ „	Chelga
	Yantungera	Atbara	„ „	—
	Dagossa	Blue Nile	„ „	—
	Kuarra	„	„ „	—
	Beghemeder	„ and Takkazeh	„ „	Sarama
	Guna	„ „ „	Dega	—
	Kainteh	„	„	—
	Sainteh	„	„	—
	Dawont	„	„	—
	Wadla	„ and Takkazeh	„	—
	Talanta	„	„	—
	Woggara	Takkazeh, Atbara	Voïna-dega, Dega . . .	—
	Simen	„	Dega	Inchatkab
	Tselemt	„	Voïna-dega, Kwalla . . .	—
	Ermecho	Atbara	Kwalla	—
GOJAM . . .	Tsagadeh	„	„	—
	Kolla Wogara	„	„	—
	Waldebba	Takkazeh	„	—
	Wolkait	„	„	Nagada
	Achefer	Blue Nile	Voïna-dega	Isinala
LASTA . . .	Macha	„	Dega, Voïna-dega . . .	—
	Gojam	„	„ „	Monkoror
	Damet	„	Voïna-dega, Kwalla . . .	—
	Agaumeder	„	„ „ „	Ashfa
TIGRÉ . . .	Dabanah	„	Dega, Voïna-de, Kwalla . .	—
	Sedeb	„	„ „ „	—
	Wag	„	„ „	Sokata
	Wojerat	„	„	—
	Enderia	„	„ Voïna-Dega	Makaleh
	Saka	„	„ „	—
	Avergaleh	„	„	—
	Iju	R'd Sea Watershed	Voïna-dega, Kwalla . . .	—
	Z'bul, Angot	„ „	„ „	Kobbo
	Sloa	Takkazeh	„ „	Samreh
TIGRÉ . . .	Tembien	„	„ „	Abbi-Addi
	Adet	„	„ „	—
	Geralta	„	„ „	Hausen
	Wambarta	„	„ „	—
	Haramat	„	Dega, Voïna-dega . . .	Chalikut
	Adua	Takkazeh, Mareb	„ „	Adua
	Shireh	„ „	Voïna-dega, Kwalla . . .	—
	Agumeh	„ „	Dega, Voïna-dega . . .	Addigrat
TIGRÉ . . .	Okuleh—Kusat	Mareb	„ „	—
	Saraweh	„	Voïna-dega, Kwalla . . .	Kodo-Fellassi
TIGRÉ . . .	Hamasan	Mareb, Barka	„ „	—

ABYSSINIAN TOWNS IN THE BASIN OF THE BLUE NILE.

Gondar, population according to G. Rohlfs	4,000
Fenja	
Jenda	
Chelga	
Amba-Mariam, population according to Lejean	4,000
Ifag and Darita, " " "	4,000
Samara (Debra-Tabor) " "	3,000 ?
Koarata, population according to Stecker	1,000
Debra-Mariam	
Bahrdar	
Ismala	
Mahdera-Mariam, population according to Lejean	4,000
Yejibbeh	
Basso	
Debra-Werk population according to Lefebvre	3,000
Dima " " Combes	2,500
Mota	
Dambacha	
Gudara	
Mankusa	
Buri	
Ashfa	
Magdala	

ABYSSINIAN TOWNS IN THE TAKKAZEH BASIN AND ON THE RED SEA.

Inchatkab	
Dobarek	
Faras-Saber, population according to Ferret	2,000
Lalibala " " Rohlfs	1,200
Sokota, population in 1881	1,500
Antälo " "	1,000
Chalikut " "	2,000
Makaleh	
Samreh	
Hausseen, population according to Lefebvre	1,200
Addigrat " " "	2,000
Senafeh	
Hulai, population according to Russel	2,000
Digsan " " Lefebvre	2,000
Abbi-Addi " " Rohlfs	2,000
Adua " " "	3,000
Aksum " " "	5,000
Kodo-Fe'assi " " "	1,200
Atsega " " Heuglin	1,800
Keren " " "	1,800
Arkiko " " Rohlfs	1,500
Massawah and suburba, in 1881	7,000
Af-Abad, population according to Sapeto	6,000
Dolka " " "	5,500
Zulla, in 1881	1,000

TOWNS OF EAST SHOA AND ADJACENT LANDS.

Ankober, estimated population	7,000
Aliu-Amba " "	4,000
Licheh " "	3,000
Angolala " "	1,000
Debra-Berham " "	2,500

DANAKIL (AFAR) TERRITORY.

Aussa, estimated population	5,000
Raheita " "	2,000

EUROPEAN POSSESSIONS.

Harrar in 1882, according to Müller	20,000
Tajurah	15,000
Zeilah	6,000

Trade of Harrar in 1879, £150,000.

TOWNS OF WEST SHOA AND NORTH GALLA STATES.

Rogeh, population according to Chiarini	10,000
Saka " " Krapf	12,000
Bonga	
Ficheh	
Woreillu	
Dildilla	
Gorieno	
Ghebisso	
Mogar	
Chora	

STATES AND PROVINCES OF SHOA AND NEIGHBOURING LANDS.

States.	Provinces.	Fluvial Basins.	Climatic Zones.	Chief Towns.
SHOA PROPER.	Efat	Awash and Nile.	Dega, Voïna-dega	Ankober
	Argobta	Awash	Voïna-dega, Kwalla	Farreh
	Gedem	" and Nile.	Dega, Voïna-dega	Kok-fara
	Efrata	Nile	" "	—
	Mans	" "	" "	—
	Tegulet	" "	" "	Licheh
	Marabieteh	" "	Voïna-dega "	—
	Shoa-meda	" "	" "	—
	Tulama	" "	" "	—
	Fa'igar	Awash	Voïna-dega, Kwalla	—
	Bulgar	" "	" "	—
	Dembi	" "	" "	Rogeh
	Etju	" "	" "	—
	Dauri	" "	" "	—
	Wollo	Nile	Dega, Voïna-dega	Woreillu
	Borena	" "	Voïna-dega, Kwalla	—
	Soddo	Awash	" "	Toleh
	Gurageh	" Wabi, Gugsä	" "	Gorieno
	Kabena	Gugsä	" "	Mogar
	Liben	Nile, Gugsä	Dega, Voïna-dega	—
	Gudru	" "	Voïna-dega, Kwalla	—
	Jimma-Lagamara	Gugsä, Nile	Dega, Voïna-dega	Lagamara
	Nonno	" "	" "	—
	Limmu	" Nile	" "	Saka
	Innarya	" "	Voïna-dega	—
	Shora	" "	" "	—
	Botor	" "	" "	—
	Guma	Nile	Voïna-dega, Kwalla	—
	Goma	" "	" "	—
	Gera	Gugsä	" "	—
	Jimma-Kuka	" "	" "	Folla
	Yangato	" "	" "	—
	Kaffa	" "	" "	Bonga
	Ghimira	" "	" "	—
AFAR TERRITORY	Modaito	Awash	Plains and Deserts	Aussa
	Northern Tribes	" "	" "	—
SOMALILAND	Issa	" "	" "	—
	Gadibursi	" "	" "	—
FOREIGN POSSESSIONS	Assab	" "	" "	Assab
	Obok and Tajurah	" "	" "	Obok
	Zeila	" "	" "	Zeila
	Harrar	Wabi	Valleys and Plains	Harrar

UPPER NUBIA.

Approximate area	224,000 sq. miles.
Estimated population	3,000,000

TOWNS OF UPPER NUBIA.

Bimbashi (Fadasi), population	1,000
Fanaka (Fazogl) "	2,000
Roseres, population according to Beltram	8,000
Karkoj "	2,000
Senâr "	8,000
Wad-Medineh, population according to Marno	2,000
Messalamieh " " Lejean	18,000
Abu-Ahraz " " Mukhtar	7,000
Doka, population according to Mukhtar	5,500
Khartum, population in 1882	70,000
Halfaya " according to the English staff	3,500
Shendi " " " "	2,500
Gos-Rejeb " " " Rokeby	1,500
Filik " " " "	1,000
Galâbat (Metammeh), population according to Caprotti	8,000
Suk Abu-Sin, population	3,000
Kassala, population in 1882.	10,000
Ed-Damer, population according to the English staff	2,000
Berber, population in 1882	10,000
Suakin and El-Kef, population in 1882	11,000
Tokar, population	4,000
Export trade of Suakin in 1879	£256,000
Shipping in 1880, according to Amici, 758 vessels of 171,681 tons.	

KORDOFÂN.

Approximate area	100,000 sq. miles.
Estimated population	300,000

CHIEF EXPORTS TO EGYPT BEFORE THE WAR.

Ostrich feathers	£86,000
Gums	55,000
Hides and skins	2,500
	£143,500

Total trade of Kordofân, according to Prout, in 1876: Imports, £50,000;
Exports, £132,500. Total, £182,500.

CHIEF TOWNS OF KORDOFÂN.

El-Obeid, population before the war	30,000
Abu-Haraz	
Melbeis	
Bara	

DAR-FÔR.

Approximate area	200,000 sq. miles.
Population according to Nachtigal	4,000,000
" " Mason	1,500,000

APPENDIX I.

CHIEF TOWNS OF DAR-FÔR.

El-Fasher, population according to Ensor	2,650
Kobé, population according to Browne	6,000
Omshanga	
Tora (Torra, Toran)	
Foja (Fojeh)	

NUBIA.

Approximate area	100,000 sq. miles.
Estimated Population	1,000,000
Extent of arable lands	1,320 sq. miles.

CHIEF TOWNS OF NUBIA.

Abu-Hamed.	Abu-Gossi.
Korosko.	Old Dongola.
Marawi.	New Dongola, population according to
Nuri.	Ensor, 7,000.
Korti.	Semneh.
Ambukol.	Wady-Halfa.
Adu-dûm.	Derr.
Dabbeh.	

EGYPT.

Total area	374,000 sq. miles.
Area of the delta	13,000 "
Area of arable lands	11,700 "
Population in 1882	6,806,400
" per total area : 11 to the sq. mile.	
" per area of arable lands : 570 to the sq. mile.	
" according to sex : men	3,216,247
" " " women	3,252,869

DISTRIBUTION OF THE POPULATION ACCORDING TO THE CENSUS OF MAY 3RD, 1882.

Sedentary	6,469,716
Nomad	245,776
Foreigners	90,886
Mahommedans	6,051,625
Christians. { Copts	408,903
{ Roman Catholics	57,389
{ Greeks	42,066
{ Protestants	4,536
{ Armenians	1,627
Jews	15,769
	514,521

FOREIGNERS IN EGYPT (1878).

Greeks	29,963
French	14,310
Italians	14,524
English	3,795
Austrians	2,480
Spaniards	1,003
Germans	879
Persians	752
Russians	358
Total	68,064

Population of Egypt in 1800	2,514,400*
Mean rate of mortality	26 to 27 per 1,000
Proportion suffering from ophthalmia	17 per 1,000

AREA AND POPULATION OF THE EGYPTIAN OASES IN 1882.

Oasis.	Extent of arable land.	Population.
Khargeh	4 sq. miles	6,16
Dakkeh	24 "	15,293
Farafreh	1 "	446
Baharieh	4 "	6,176
Siwah	15 "	5,600 (†)
Gara	2 "	40
Faredgha	2 "	2,006
Total	48	35,727

AREA AND POPULATION OF THE KHEDIVAL POSSESSIONS BEFORE THE WAR.

	Area in sq. miles.	Population.
Egypt	374,000	6,806,000
Oases	48	35,000
Zeriba Region	140,000	10,000,000
Sobat and Yal Basins	60,000	3,000,000
Upper Nubia (Senâr, &c.)	224,000	3,000,000
Lower Nubia	100,000	1,000,000
Kordofân	100,000	300,000
Dar-Fôr	200,000	1,500,000
Total	1,208,048	25,641,000

TRANSIT TRADE OF THE SUEZ CANAL.

Year.	No. of vessels.	Tonnage.	Receipts.
1870	486	654,915	£208,370
1875	1,494	2,940,708	1,156,000
1880	2,026	4,344,519	1,595,000
1882	3,198	7,122,125	2,536,343
1883	3,307	8,051,407	2,741,000

Mean tonnage of vessels in 1870, 1,343; in 1877, 2,015.

Mean transit dues of each vessel	£830
Net profits (1883)	£1,226,972
Number of passengers in 1883	119,177

SHIPPING ACCORDING TO NATIONALITIES IN 1883.

	Vessels.	Tonnage.
British	2,565	5,795,584
French	165	405,846
Dutch	103	254,274
German	109	176,764
Italian	61	153,493
Austrian	67	121,711
Spanish	32	78,663
Russian	18	36,061
Norwegian	20	35,502
Belgian	13	24,325
Egyptian	21	13,973
Turkish	10	11,235

* Estimated at the rate of eight persons per house, the houses being returned at 600,700.

APPENDIX I

CAPITAL ACCOUNT OF THE SUEZ CANAL COMPANY (1882).

397,438 shares of £20*	£7,948,760
301,848 obligations of £20, each issued at £12, bearing interest at 5 per cent. on par	6,036,960
83,993 delegations of £20 each, bearing interest at 5 per cent.	1,679,860
99,990 thirty-three-year bonds of £5, at 8 per cent. interest	499,950
15,152 bonds of £20 at 3 per cent.	303,040
399,765 bonds of £3 8s. each at 5 per cent., issued for the consolidation of unpaid shares, redeemable at par	1,335,201
100,000 founder's shares, which on surplus profits yielded interest	126,697

SHIPPING OF SUEZ IN 1880.

Entered	581 vessels of 682,110 tons.
Cleared	563 „ 677,626 „
Total	1,144 „ 1,359,736 „

SHIPPING OF ISMAILIA IN 1882.

271 steamers of 596,000 tons

SHIPPING OF PORT-SAÏD IN 1880 (EXCLUSIVE OF THE TRANSIT TRADE).

Entered	1,507 vessels of 997,611 tons.
Cleared	1,530 „ 997,395 „
Total	3,037 „ 1,995,006 „

SHIPPING OF DAMIETTA IN 1880.

Entered	1,198 vessels of 83,215 tons.
Cleared	1,176 „ 79,996 „
Total	2,374 „ 163,211 „

SHIPPING OF ROSETTA IN 1880.

Entered	738 vessels of 20,124 tons.
Cleared	726 „ 19,717 „
Total	1,464 „ 39,841 „

SHIPPING OF ALEXANDRIA IN 1880.

Entered	3,305 vessels of 1,292,296 tons.
Cleared	3,250 „ 1,303,827 „
Total	6,555 „ 2,596,123 „
Total, 1881	7,363 „ 2,677,414 „
Mean value of imports	£5,000,000
„ exports	13,000,000
Total mean trade of Alexandria	£18,000,000

EGYPTIAN COMMERCIAL NAVY.

Steamers on the Nile	40
„ „ Red Sea and Mediterranean	16
Sailing vessels of all classes	1,500
River craft	10,300

* Of these 397,438 shares, 176,602 were purchased from the Khedive by the British Government in 1875 for £3,976,582. But the dividends on these shares had already been alienated up to the year 1894, and placed at the disposal of the Company. Against these the Company issued 120,000 "delegations," which are entitled to all sums accruing on the 176,602 shares up to 1894.

TOTAL TRADE OF EGYPT IN 1880.

Imports	£8,596,000
Exports	12,271,000
Total	£20,867,000

SHIPPING IN 1880.

Entered	8,119 vessels of 3,102,772 tons.
Cleared	8,040 „ 3,106,545 „
Total	16,159 „ 6,209,317 „

SHIPPING ACCORDING TO NATIONALITIES.

British	2 556 vessels of 2,953,275 tons.
Austrian	744 „ 766,220 „
French	492 „ 699,288 „
Egyptian	7,136 „ 590,442 „
Italian	515 „ 422 966 „
Sundries	4,143 „ 412,777 „

IMPORTS AND EXPORTS ACCORDING TO NATIONALITIES.

	Imports from, 1882.	Exports to, 1882.
Great Britain	£2,886,026	£7,322,358
Russia	215,889	979,412
France	910,320	964,294
Italy	228,009	747,689
Austria	683,391	436,350
Turkey	110,346	383,633
Greece	20,073	77,027
America	115,631	30,966
India, China, Japan	311,323	—
Sundries	115,631	166,633
Total	£5,696,739	£11,108,262

CHIEF ARTICLES OF IMPORT AND EXPORT (1882).

Import.		Export	
Cotton goods	£1,340,037	Cotton	£7,570,634
Coal	769,272	Cotton seed	1,190,458
Clothing, &c.	221,600	Sugar	576,844
Indigo	210,428	Beans	571,134
Timber	182,645	Maize	164,385
Wines and spirits	175,516	Gums	142,068
Sugar	172,333	Hides	138,586
Machinery	168,818	Rice	120,085
Woollen goods	114,855	Lentils	68,436
Petroleum	112,607	Ostrich feathers	65,425
Rice	97,257	Wool	46,516
Oils	68,505		

POPULATION OF THE CHIEF EGYPTIAN TOWNS ACCORDING TO THE CENSUS OF 1882.

Cairo	374,838	Gizeh	11,410
Alexandria	213,010	Mit Ghamr	11,225
Damietta	31,044	Ziftah	11,140
Tantah	33,750	Suez	10,919
A-siut	31,575	Mellaweh	10,777
Mahallet-el-Kebir.	29,908	Abutig	10,772
Mansurah	26,942	Beni-Suef	10,085
Medinet-el-Fayum	25,799	Fuah	9,903
Damanahur	23,353	Esneh	9,422
Zagazig	19,815	Sohag	8,774
Akhmin	18,777	Kaliub	8,636
Rosetta	16,666	Menzaleh	8,450
Port Said	16,560	Benha-l' Assal	8,354
Menuf	16,281	Dessuk	7,677
Shibin-el-Kôm	16,250	Belbeis	7,309
Minieh	15,900	Ramleh	4,342
Keneh	15,402	Khargeh	3,787
Sanhures	15,392	Kasr-Dakhel	3,539
Girgeh	15,239	Ismailia	3,364
Tantah	13,789	Abukir	2,530
Manfalut	13,234	El-Arish	2,430
Samanud	11,557		

AGRICULTURAL RETURNS.

Land under tillage	11,000 sq. miles.
Steppe lands	50,000 "
Desert, marsh, and waste	313,000 "
Sugar plantations in 1880	38,000 acres.
Sugar crop	46,750 tons, value £935,000.
Date-trees in 1875	5,000,000
Average date crop	100,000 to 120,000 tons.
Cotton plantations in 1883	450,000 acres.
Cotton crop in 1883	£6,760,000
Cotton seed "	£1,164,000
Raw cotton exported in 1866 (the "cotton famine year")	£16,000,000
" " to Great Britain in 1882	£5,034,785
Cereals exported to Great Britain in 1882	£780,364

IRRIGATION WORKS.

Nili Canals open in 1880	8,000 miles.
Sefi " " "	2,000 "
Steam Pumps	300
Sakiehs	30,000
Shadufs	70,000

RAILWAYS AND TELEGRAPHS.

Railways open in 1884	900 miles.
Private agricultural lines	250 "
Total	1,150 "
Railway passengers in 1879	2,172,668
" " " 1880	3,093,840
Goods traffic	5,250,000 tons.
Telegraphs in Egypt and the Egyptian possessions in 1878	4,700 miles.

PONTAL SERVICE (1893).

Letters posted to foreign countries	2,407,000
Newspapers, books, packages, &c.	1,365,000
Letters posted for the interior	4,196,713
Books, &c., " "	1,741,000
Total	9,709,713

VITAL STATISTICS.

Years.	Births.	Deaths.	Excess of Births.
1873	184,742	133,720	51,022
1874	177,732	144,024	32,808
1875	182,820	119,912	62,908
1876	186,679	132,008	54,671
1877	173,529	138,668	34,861

EDUCATIONAL RETURNS.

Attendance at all Mohammedan schools in 1820	3,000
" " " 1866	60,000
" " " 1873	90,000
" " " 1878	137,550
Mohammedan schools in 1878	5,370
Foreign schools in 1880	152

Attendance, 6,419 natives ; 5,828 foreigners.

Newspapers (1879) French, 9 ; Arabic, 7 ; Italian, 5 ; Greek, 3 ; Sundries, 5. Total 29.

FINANCE (1883).

REVENUE.

Revenue from land and other direct contributions	£5,367,684
Indirect revenues, including customs, posts, octrois, and salt-tax	1,854,294
Railway and telegraphs	389,104
Total	£7,611,082

EXPENDITURE.

Tribute to Turkey	£678,397
Public debt	3,348,164
Cost of administration	4,155,357
Total	£8,181,918
Surplus	£570,836

PUBLIC DEBT.

Unified 4 per cent.	£56,726,420
Privileged debt	22,446,800
Domain loans at 5 per cent.	8,254,820
Daira Sanieh loans at 4 to 5 per cent.	8,991,820
Floating debt, estimated at	5,000,000
Turkish debt secured upon the tribute	11,918,800
Loan guaranteed by the Powers in 1886	7,000,000
Total	£120,338,660

APPENDIX I.

CIVIL LIST.

Annual allowance to Khedive	£100,000
„ „ late Khedive	40,000
„ „ other members of the family	175,000
Total	£315,000

THE KHEDIVAL DYNASTY.

	Born.	Died.	Reigned.
Mohammed Ali, founder of the dynasty	1769	1849	1811-48
Ibrahim, son of Mohammed	1789	1848	1848
Abbas, grandson of Mohammed	1813	1854	1848-54
Said, son of Mohammed	1822	1863	1854-63
Ismail	1830	—	1863-79
Mohammed Tewfik, son of Ismail	1852	—	1879

ADMINISTRATIVE DIVISIONS, WITH THEIR CHIEF TOWNS, AREAS, AND POPULATIONS FOR 1882.

Regions.	Provinces.	Chief Towns.	Area in Sq. Miles.	Population.
LOWER EGYPT (pop. 3,875,613)	Cairo	Cairo	8	374,838
	Alexandria, with Siwah	Alexandria	33,280	236,400
	Damietta	Damietta	360	43,616
	Rosetta	Rosetta	50	19,378
	Beherah	Damanahur	4,310	372,836
	Sharkieh	Zagazig	1,745	437,737
	Dakhalieh	Mansurah	824	584,204
	Gharbieh	Tantah	1,236	912,167
	Kaliubieh	Kaliub	330	255,507
ISTHMUS (pop. 32,471)	Menufieh	Menuf	630	643,934
	Port Said and Ismailia	Port Said	2,490 {	21,296
	Suez	Suez		11,175
	El-Arish	El-Arish	36,430	2,986
	Assiut	Assiut	51,480	550,275
UPPER EGYPT (pop. 2,643,554)	Beni-Suef	Beni-Suef	20,170 {	194,902
	Fayum and Oasis	Medinet-el-Fayum		207,398
	Esneh and Oasis	Esneh	167,820	245,851
	Girgeh	Girgeh	6,280	516,125
	Gizeh	Gizeh	9,900	274,815
	Keneh	Keneh	34,830 {	384,025
	Kosseir	Kosseir		2,430
	Minieh	Minieh	44,360	295,073



APPENDIX II.

A SYNOPTICAL TABLE OF ALL THE RACES AND TRIBES OF NORTH-EAST AFRICA.*

I. BANTU GROUP.

<i>Wa-Ganda</i> . . .	North-west side Victoria Nyanza, from the Somerset to the Alexandria Nile (Tanguré), the most numerous and powerful Bantu nation in the region of the Great Lakes.
<i>Wa-Nyoro</i> . . .	Between Somerset Nile and Albert Nyanza.
<i>Wa-Soga</i> . . .	East from the Somerset Nile.
<i>Wa-Gamba</i> . . .	East from the Wa-Soga territory; limits undefined.
<i>Wa-Karagwé</i> . . .	West side Victoria Nyanza, from the Alexandria Nile southwards to the Wa-Zinza territory.
<i>Wa-Songora</i> . . .	West side of the Victoria Nyanza, between the Wa-Karagwé and the coast.
<i>Wa-Sambara</i> . . .	South-east coast Victoria Nyanza, north of Speke Gulf.
<i>Wa-Tutwa</i> . . .	South of Speke Gulf.
<i>Wa-Sukuma</i> . . .	Large nation with numerous subdivisions (Wa-Rima, Wa-Vira, Wa-Smas, Wa-Hindi, &c.), south coast Victoria Nyanza, south of Speke Gulf.
<i>Wa-Zinza</i> . . .	South coast Victoria Nyanza, west from the Wa-Sukuma.
<i>Wa-Nyambo</i> . . .	Large tribe in Karagwé; speak the Zongora language, a distinct Bantu dialect.

II. NEGRO GROUP.

Numerically the Negro is by far the most important element in Egyptian Sudán. It is in almost undisturbed possession, not only of the main stream from the great lakes to and beyond the Sobat junction, but also of the Sobat Valley itself, and of the countless headwaters of the White Nile converging from the west and south-west at Lake No, above the Sobat junction. Within this area is probably concentrated one-half of the population of the whole Nile basin, from the equatorial lakes to the Mediterranean, a population which has been roughly estimated at about forty millions. Here are several large and powerful Negro nations, some still enjoying political autonomy, such as the Zandeh (Nyam-Nyam), the Mittu, and the Monbuttu, who occupy the low water-parting between the Nile, Congo, and Tsad basins, some brought within the limits of the Khedive's possessions, such as the Bari and Nuer

* Enlarged from A. H. Keane's "Ethnology of Egyptian Sudán." London: 1884.

of the Bahr-el-Jebel, the Bongo (Dor), Rol, and Krej of the western affluents of the White Nile, the Funj of Senaar, and the Shilluks and Dinkas about the Sobat confluence. The most numerous and widespread are the Zandeh, the eastern portion of whose territory has alone been explored. They are divided into several independent states, stretching from the Bahr-el-Jebel half across the continent, probably to the territory of the Fans in the far West.

Of the reduced nations, the Shilluks and Dinkas are by far the most important. The Shilluks appear to be of the same stock as the Funj of Senaar, who by fusion with the Arabs formed a powerful kingdom, which in the last century extended northwards beyond the Atbara confluence. Of the Dinkas, who number several millions, as many as twenty-five distinct tribes are mentioned by D. G. Beltrame,* who has resided several years amongst the native communities of the White Nile.

Although grouped as Negroes proper, very few of these Nilotic peoples present the ideal type of the Blacks, such as we find it amongst the Ashantis and other inhabitants of Upper Guinea. The complexion is in general less black, the nose less flat, the lips less protruding, the hair less woolly, the dolichocephaly and prognathism less marked—in a word, the salient features of the Negro race less prominent than elsewhere. Apart from the more minute shades of transition due to diverse intermingling with the Hamites and Semites,† two distinct types may be plainly distinguished—one black and long-headed (Shilluk, Dinka, Nuer, Mittu), the other reddish or ruddy brown and short-headed (Bongo, Zandeh, &c.). The complexion of the latter may possibly be due to the properties of the red earth prevalent in their districts.‡ But no theory has been advanced to account for their brachycephaly, which is all the more difficult to explain, inasmuch as it is characteristic neither of the aboriginal Negro, nor of the intruding Hamite and Semite elements.

Schweinfurth tells us that the Bongos are “hardly removed from the lowest grade of brachycephaly” (*op. cit.* i., 263), and the same is largely true of the Zandeh. But this feature appears to be altogether far more general amongst the Negro races than is usually supposed. Of the eighteen skulls from Equatorial Africa in the Barnard Davis Collection (now in the museum of the College of Surgeons, London), as many as four are distinctly round-headed. Craniology thus fails in Negroland, as it does in so many other regions, as a constant factor in determining racial types.

The Nilotic races appear to form a connecting link between those of Baghirmi in the Tsad basin, and the non-Bantu peoples between the Kilima-Njaro highlands and the east side of the Victoria Nyanza, who have been recently visited by the Rev. T. Wakefield and Mr. Thomson. The Wa-Kavirondo nation of this region are allied in speech to the Shilluks and the Yambu of the Sobat Valley.§ The language of their neighbours, the Oigob (Masai), also presents a remarkable peculiarity in the presence of grammatical gender, which it has in common with all the dialects of the Nilotic Negroes, except the Dinka.|| This point is of great philological interest, grammatical gender being a feature hitherto supposed to be restricted to the three inflecting families (Aryan, Semitic, and Hamitic), besides the Hottentot, by Lepsius, partly on this ground, affiliated to the Hamitic. In Oigob gender, represented by *l* masculine, and *n* feminine, is fully developed. Thus: *ol* = he, that man; *il* = those men; *en*, *eng* = she; *ing* = those women; *el-e* = this man; *en-a* = this woman; with which compare the Bari: *lo* = this man; *na* = this woman; the Bongo: *bah* = he; *hoh* = she; and the Shilluk: *nenno* = he; *náno* = she. Lepsius, however, is inclined to regard the so-called gender particles

* “Grammatica e Vocabolario della lingua Denka,” Rome, 1880, p. 231.

† In Senaar alone the Arabs reckon as many as six gradations between the pure Negro and the Semite: 1. El-Asraf, or yellow; 2. El-Kat Fatalobin, the Abyssinian; 3. El-Akdar, or red; 4. El-Azraq, or blue; 5. El-Ahsdar, or “green”; 6. Ahbit, the Nubian.

‡ Schweinfurth, “Heart of Africa.”

§ Rev. T. Wakefield, in “Proceedings of the Geographical Society,” for December, 1882.

|| Lepsius, “Einleitung.”

of the Oigob simply as "class prefixes" analogous to those of the Bantu system. They certainly seem to indicate, besides sex, the qualities of strength, vigour, courage (masculine), or else anything soft, effeminate, weak or delicate (feminine). Thus the Masai call themselves *il Oigob* = "the men," using the masculine particle, whereas their Wa-Kwafi neighbours are stigmatised with the feminine particle, as *im-Baracúio*, plural *em-Baracúi*, implying weakness or effeminacy. It is also noteworthy that, as with the Bantu prefixes, the masculine and feminine articles are repeated in a more or less modified form, both before the noun and its adjective. Thus: *ol-doeno oibor* = the-mountain the-white (masculine); *en-angu na-ibor* = the-dress the-white (feminine). These forms are most instructive as probably supplying the crude beginning of the highly developed alliterative Bantu system on the one hand, and on the other those of true grammatical gender as fully elaborated in the higher orders of inflecting speech. Compare, for instance, with the foregoing examples, the Zulu-Kafir: *in-Kósi en-Kulu* = the-chief the-great; and the Latin: *domin-a me-a* = lady-the my-the, where the parallelism between the respective initial and final "euphonic concords" is obvious. Here also we see how the different morphological orders of speech merge imperceptibly one in the other, and how groundless is the new philological doctrine that these several orders are definitely fixed, and, like Cuvier's animal and vegetable species, incapable of further transformation.

Although Islám has made considerable progress, especially amongst the Funj of Senaar, the Shilluks, Dinkas, and other Nilotic Negro tribes, the bulk of the people are still practically nature-worshippers. Witchcraft continues to flourish amongst the Equatorial tribes, and important events are almost everywhere attended by sanguinary rites. When preparing for battle, the "medicine-man" flays an infant and places the bleeding victim on the war-path to be trampled by the warriors marching to victory. Cannibalism also, in some of its most repulsive forms, prevails amongst the Nyam-Nyam, who barter in human fat as a universal staple of trade; and amongst the Monbuttu, who cure for future use the bodies of the slain in battle, and "drive their prisoners before them, as butchers drive sheep to the shambles, and these are only reserved to fall victims on a later day to their horrible and sickly greediness."* Yet many of these peoples are skilled agriculturists, and cultivate some of the useful industries, such as iron smelting and casting, weaving and pottery, with great success. The form and ornamental designs of their utensils display real artistic taste, while the temper of their iron-implements is often superior to that of the imported European hardware. Here again the observation has been made, that the tribes most addicted to cannibalism also excel in mental qualities and physical energy. Nor are they strangers to the finer feelings of human nature, and above all the surrounding peoples the Zandeh anthropogists are distinguished by their regard and devotion for the weaker sex.

<i>Kavirondo</i>	.	.	{	East side Victoria Nyanza, dominant from the Wa-Soga territory to the Kerewé Island, south-east corner of the lake. Speech appears to be Negro and akin to Shilluk. "The Wa-Kavirondo are by no means attractive in their appearance, and contrast unfavourably with the Masai. Their heads are of a distinctly lower type, eyes dull and muddy, jaws somewhat prognathous, mouth unpleasantly large, and lips thick, projecting and everted; they are, in fact, true Negroes."—Joseph Thomson, "Through Masai Land," p. 474.
<i>Kuri</i>	.	.		
<i>Kara</i>	.	.		
<i>Nanda</i>	.	.	.	Nanda uplands, north of Kavirondo, fierce wild tribes of uncertain affinities.
<i>Shafalu</i>	.	.	.	North U-Nyoro, akin to the Shilluks.
<i>Madi</i>	.	.	{	Between the Lower Somerset Nile and the Madi Mountains, and limited westwards by the Bahr-el-Jebel.
<i>Shuli</i>	.	.		
<i>Laboré</i>	.	.	.	
<i>Gambil</i>	.	.	.	
<i>Kirim</i>	.	.	{	Middle and Upper Sobat basin.
<i>Mala</i>	.	.		
<i>Ishing</i>	.	.		

* Schweinfurth, *op. cit.*, ii. p. 93.

<i>Janghey</i>	} Lower Sobat Basin.	
<i>Jibba</i>		
<i>Bonjak</i>		
<i>Balok</i>		
<i>Fallanj</i>		
<i>Niwak</i>		
<i>Koma</i>		
<i>Suro</i>	}	
<i>Amam</i>		
<i>Bari</i>		Both sides Bahr-el-Jebel, 4°—5° N., limited northward by the Shir territory.
<i>Monbuttu</i>		About headwaters of the river Welle, beyond the Egyptian frontier.
<i>Zandeh</i>		From south-west frontier Egyptian Sudán for unknown distance westwards; are the Niam-Niam of the Nilotic tribes.
<i>Mittu (Mattu)</i>	{ A-Madi Madi-Kaya Abbakah Luba	Moro district north of Monbuttuland. The Mittu call their country Moro, which is not an ethnical but a geographical name (Schweinfurth, "Heart of Africa," i. p. 403).
<i>Bongo (Dor)</i>		Upper Course Tondy and Jur rivers, thence to Zandeh frontier.
<i>Shir</i>		Bahr-el-Jebel 5°—6° N., between the Diuka and Bari territories.
<i>Rol</i>		
<i>Agar</i>	}	Tribes of uncertain affinity along Rol river, east of the Bongo and Mittu.
<i>Sofi</i>		
<i>Lehsi</i>		
<i>Nuer</i>		
	{ Byor Ror	Along lower course Bahr-el-Jebel, 7°—9° N.
<i>Dinka</i>	{ Abuyo, Agar, Ajak, Aliab, Arol, Atwot, Awan, Bor, Donjol, Jur, Gok, Rish	Along Bahr-el-Jebel, and right bank White Nile, 6°—12° N. Largest of all the Nilotic Negro tribes (Beltrame).
<i>Shilluk</i>	{ Kwati, Dyakin, Dyok, Roah	Left bank Bahr-el-Jebel and White Nile, 9°—12° N.
<i>Duwir</i>	}	Unclassed tribes south of the Dinkas. north-east of the Bongos, 7°—8° N., between Molmul and Rual rivers; probably akin to the Bongos.
<i>Ayarr</i>		
<i>Mok</i>		
<i>Tondy</i>		
<i>Böt</i>		
<i>Ayell</i>		
<i>Takruri</i>		Gallibat district, Abyssinian frontier, originally from Dar-Fur (James's "Wild Tribes of the Sudán," p. 30).
<i>Funj</i>		The dominant race in Senaar, supposed to be of Shilluk stock, but now largely mixed with the Arabs of that region.
<i>Krej</i>	}	About headwaters of the Bahr-el-Arab, beyond Egyptian frontier.
<i>Fertit</i>		

III. NUBA GROUP.

The Nobatæ of Diocletian are commonly assumed to be the modern Nubians. But, although not yet recognised in British official reports, the Nubian race and name have even a more venerable antiquity than this statement would imply. In a passage quoted in note 22 we find mention already made by Strabo of the Νοῦβαι; and in another passage the same writer, who flourished three hundred years before the time of Diocletian, describes these Nubæ as "a great nation" dwelling in Libya, that is, Africa, along the left bank of the Nile from Meroe to the bends of the river.* The word itself has even been identified by some writers with the land of *Nub* or *Nob*, that is, "Gold," the region about Mount Elbeh on the Red Sea coast over against Jiddah, where the Egyptians worked the precious metal from the remotest times.

But this identification must be rejected since the discovery that the cradle of the

* 'Εξ ἀριστέρων δὲ ῥῶσιως τοῦ Ναιλου Νοῦβαι κατοικοῦσιν ἐν τῇ Αἰβύβ, μέγα ἔθνος, &c. (Book 17, p. 1117, Oxford ed., 1807.)

Nuba race is not to the east but to the west of the Nile,* in the Kordofan highlands. The final syllable *fān* of the very word Kordo-fān is explained to mean in the Nuba language *land, country*, thus answering to the Arabic *dār*, as in Dār-Fur = the land of the Fur people. Both the Fur and the Kordo, if these latter are identical with the Karga of the Jebel-Kargo, are themselves of Nuba stock and speech; and the term Nuba is still current in Kordofan both in an ethnical and a geographical sense, indicating the Jebel-Nuba uplands inhabited by the Nuba tribe. Here, therefore, is the true home of the race, some of whom appear to have migrated northwards some two thousand years ago, settling partly in the Kargey oasis (Diocletian's Nobatæ), partly in the narrow valley of the Nile about Meroe (Strabo's Nubæ).

Since those days there have always been Nubæ, Nobatæ, or Nubians in the Nile Valley, mainly in the region of the Cataracts; and we read that after their removal hither from Kargey, the Nobatæ dwelt for some time peacefully with the Blemmyes (Hamitic Bejas). They even made common cause with them against the Romans; but the confederacy was crushed by Maximinus in 451. Then the Bejas withdrew to their old homes in the Arabian desert, while the Nobatæ, embracing Christianity in 545, developed a powerful Christian state in the Nile Valley. Sileo, founder of this kingdom of Dongola, as it was called from its capital, bore the title of "King of the Noubads and of all the Ethiopians," that is, of the present Nubian and Beja nations. His empire lasted for 700 years, and was finally overthrown by the Arabs in the thirteenth century, since which time the Nile Nubians have been Mohammedans. They also gradually withdrew to their present limits between Egypt and Old Dongola, the rest of their territory thence to Khartum being occupied by the Sheygyeh, Robabat, Jalin, and other powerful Arab tribes.

There are thus two main divisions of the Nuba race: the Nubas proper of Kordofan, found also dispersedly in Dar-Fur; and the Nile Nubas, commonly called Nubians in European books of travel, but who now call themselves Barabra.† By the latter the term Nuba has been rejected, and is even regarded as an insult when applied to them by others. The old national name appears to have fallen into discredit in the Nile Valley, where it has become synonymous with "slave," owing to the vast number of slaves supplied for ages by the Nuba populations of Kordofan and Dar-Fur.‡ The Nile Nubas themselves supply no slaves to the market. Constituting settled and semi-civilised Mohammedan communities, they are treated on a footing of perfect equality in Egypt, where large numbers are engaged as free labourers, porters, "costermongers,"

* This is also confirmed by Ptolemy, who (iv. 8) speaks of the Nubæ as "maxime occidentales Aivalitarum."

† Plural of Berberi, that is, people of Berber, although at present they do not reach so far up the Nile as that town. But during the eighteenth century this place acquired considerable influence as capital of a large Nubian state tributary to the Funj kings of Senaar. It is still an important station on the Nile just below the Atbara confluence, at the point where the river approaches nearest to the Red Sea coast at Suakin. It may here be mentioned that the term *Barabra* is referred by some authorities, not to the town of Berber, but to the *Barabara* people, whose name occurs amongst the 113 tribes recorded in the inscription on a gateway of Thutmes, by whom they were reduced about 1700 B.C. This identification seems to some extent confirmed by the generic name *Kens* applied in the same inscription to many of these "Ethiopian tribes," and still surviving in the form of *Kenus* (plural of *Kensi*), the name of the northern division of the Nubian (*Barabra*) people towards the Egyptian frontier. It is further strengthened by a later inscription of Ramses II. in Karnak (1400 B.C.), where mention again occurs of the *Beraberata*, one of the southern races conquered by him. Hence Brugsch ("Reisebericht aus Ägypten," pp. 127 and 155) is inclined to regard the modern "Barabra" as a true ethnical name confused in classic times with the Greek and Roman *Barbarus*, but which has resumed its historic value since the Moslem conquest.

‡ Thus in Sakakini's tabular returns of the average prices of slaves sold in Egypt from 1870 to 1880, all, of whatever *provenience*, are grouped under two heads—"Nubians" and "Abyssinians," none being true Nubians or Abyssinians, but either Nubas and other Negroes from Kordofan and the Upper Nile, or else Barca, Basé, Shan-Gallas, and other Negroid peoples from the Abyssinian uplands. According to these returns the latter command the highest prices in the slave market, £20 to £50 for adults, the Nubas fetching only from £18 to £40.

and in various other pursuits. They are a strong, muscular people, essentially agricultural, more warlike and energetic than the Egyptians, whom they also excel in moral qualities. Their Mohammedanism is not of a fanatical type; and although the present Mahdi is a Nubian of Dongola, he has found his chief support not amongst his countrymen, but amongst the more recently converted Negroes, and especially the Arab and Hamite communities of Kordofan and other parts of Eastern Sudán.

There is a marked difference between the physical appearance of the two great branches of the Nuba race. The Nubian (Barabra) type is obviously Negroid, very dark, often almost black, with tumid lips, large black dreamy eyes, dolichocephalic head (73·72 as compared with the normal Negro 73·40, and the old Egyptian 75·58), woolly or strongly frizzled hair. The scant beard is still worn under the chin, like the figures of the Negro fugitives in the battle-pieces sculptured on the walls of the Egyptian temples. But, as amongst all mixed peoples, there are considerable deviations from the normal Nubian standard, some showing affinities to the old Egyptian, as already remarked by Blumenbach, some noted for their fine oval face and regular features, others for their long or slightly crisp hair, and bronze,* reddish brown, or deep mahogany complexions. In general it may be said with Burkhardt that the nose is less flat, the lips less thick, the cheekbones less prominent, the colour less dark ("of a coppery tinge"), than amongst the true Negroes. The Nile Nubians must therefore be regarded as essentially a mixed race, presenting every shade of transition between the original Nuba type and the various Hamitic and Semitic elements with which they have intermingled in the Nile Valley.

The original Nuba type itself must be studied in the Kordofan highlands, where it persists in its greatest purity. The Kordofan Nubas are unanimously described by Russeger, Petherick, Lepsius, and other intelligent observers as emphatically a Negro race. "Negerstämme," "Negerfolk," "Negroes," "Niggers," are the unqualified terms applied to them in all books of travel, so that there can be no doubt at all on this point.† Its importance is obvious, for it settles the question of the true affinities of the Nile Nubians, about which so much controversy has prevailed.

It is remarkable, however, that Lepsius traces the Nile Nubians, not to the Kordofan Nubas, but directly to the Uaua Negroes of the Nile Valley. These Uaua are the oldest people, of whom there is any record, in this region. Their name occurs on a tomb at Memphis dating from the time of Pepi, sixth dynasty, 2500 B.C. They are again mentioned in the Wady-Halfa inscription amongst the tribes reduced by Useratesen II., of the twelfth dynasty. Allusion is also made to the *Uauat* country, and in many subsequent inscriptions the Uaua figure largely as at the head of all the Negro races beyond the Egyptian frontier. In fact, the word became the conventional or stereotyped name of the Nile Negroes generally down to the time of the Ptolemies, after which it suddenly disappears from historic records.

This disappearance has not been explained. But it was probably due to the already mentioned irruption of the Bugaitæ (Bejas), by whom the Uaua were reduced, if not exterminated. There is consequently no necessary connection between them and the Nubians, whose more recent migration from Kordofan to the Nile Valley may be regarded as clearly established.

Whatever doubt might remain on this point is removed by a consideration of the linguistic argument. In his masterly treatise on the Nubian language quoted farther back, Lepsius himself has shown that the speech of both branches of the Nuba race is identical, presenting merely some slight dialectic varieties, easily explained by the length of time that has elapsed since the migration. The structure is the same, and the

* The bronze shade is also noticed by Lepsius, *op. cit.* p. 74: "Bei den Nubiern herrscht eine dunkle Broncefarbe vor, dunkler als die der Habessinier." He adds: "Der alte Negertypus bricht nicht selten wieder ziemlich deutlich durch; namentlich ist das Wollhaar ziemlich häufig."

† All have woolly hair, says Rüppel ("Reisen in Nubien"), pouting thick lips, short flat nose, complexion quite black. Further comment is needless.

subjoined list of a few common words in the Dongolawi of the Nile and in four Kordofan dialects shows that the vocabulary also is essentially one:—

English	Dongolawi (Nile).	Jebel Kargo	Jebel Kolaji.	Jebel Nuba.	Jebel Kulân.
Mouth . .	agil	ogl	aul	aljo	awol
Foot . .	gedem	kogodl	kuddo	koôrdo	ket
Cow . .	ti	ti	eh	ti	teh
Fire . .	ig	ik	eka	?	ika
One . .	wari	ber	bera	ber	ber
Two . .	owi	orre	ora	ora	ora
Three . .	toski	toje	toje	toju	toju

It is incredible that the speech of the Uaua Negroes and Kordofan Nubas, if originally the same, could have maintained its identity with such slight changes as these for a period of nearly 4,400 years—that is, from the time of Pepi (2500 B.C.), when mention first occurs of the Uaua. It seems safe to conclude, that while the identity of the Nile and Kordofan Nubas is established, neither branch has any obvious or necessary connection with the extinct Uaua of the Egyptian records.

Independently of this consideration, the Nubian language, first clearly elucidated by Lepsius, presents some points of interest both to the philologist and ethnologist. Its Negro character is shown in its phonology, in the complete lack of grammatical gender, and in some structural peculiarities. Such is the infix *j* inserted between the verbal root and the plural pronominal object, as in *ai tokki-j-ir* = I shake them. As in Bantu, the verbal conjugation is highly developed, presenting such a multiplicity of forms that in Lepsius' Grammar the complete paradigm of a single verb fills as many as 110 pages. The Nubian language never appears to have been cultivated, or even committed to writing.* Hence it is not likely to afford the key, as some have suggested, to the numerous undeciphered inscriptions occurring along the banks of the Nile as far south as Senaar.

It enables us, however, to dispose of the so-called "Nuba-Fulah" family, originally constituted of heterogeneous elements by Frederick Müller, and generally accepted by anthropologists on the authority of that distinguished ethnologist. We have already seen at the outset that the Fulahs are a non-Negro race, most probably allied to the western Hamites of the Sahara. The Fulah speech, also, appears from Krause's Grammar to be a non-Negro language, betraying not the remotest resemblance to the Nuba. Thus the Nubas are of Negro stock and speech, and so the "Nuba-Fulah" family is dissolved, its *disjecta membra* finding each its place amongst its own kindred.

<i>Nuba</i> . . .	} Kordofan, chiefly in central and southern districts, 11°—13° N.	}
<i>Kargo</i> . . .		
<i>Kulfan</i> . . .		
<i>Kolaji</i> . . .		
<i>Tumali</i> . . .		

NUBAS PROPER.

WESTERN NUBAS.

<i>Fur</i> . . .	The dominant race in Dar-Fur, to which country it gives its name; speech appears to be akin to Nuba.
<i>Kunjara</i> . . .	Dar-Fur and Kordofan: a branch of the Fur, whose language they still speak.

NILE NUBAS ("NUBIANS," "BARABRA").

<i>Mattokki</i> (<i>Kenus</i>) . .	From Asuan (First Cataract) to Sebu and Wadi-el-Arab.
<i>Saidokki</i> , <i>Mahai</i> , or <i>Marisi</i> . . .	From Kerosko to Wady-Halfa (Second Cataract)

* It is noteworthy, however, that Eutychius of Alexandria (930) includes the "Nubi" among the six kinds of writing, which he tells us in a somewhat doubtful passage, were current amongst the Hamitic peoples.

- Dongolawi* . . . Province Dongola, from Wady-Halfa to Jebel Dera, near Meroe, where the Shegyeh Arab territory begins.
- Danagele* . . . Recent Nubian immigrants into Kordofan and Dar-Fur; chiefly from Dongola, whence the name Danagele. Most of them now speak Arabic (Munziger).

IV. SEMITIC GROUP.

Of this division of the Caucasian stock two branches are represented in North-East Africa: 1. The Yoktanides, or Himyarites, from prehistoric times, mainly in the Abyssinian highlands beyond the Egyptian frontier—Tigré, Amhara, Bogos,* and others speaking more or less corrupt dialects of the Gheez or old Himyaritic language of South Arabia. 2. The Ismaelites, or Arabs proper, a few probably from prehistoric times, especially in Senaar; but the great majority since the Mohammedan invasion in the seventh century, chiefly in the steppe-lands west of the Nile from the Sobat confluence northwards to Dongola. Some of the early arrivals, such as the Jowabere and El Gharbiye, appear to have settled in the Nile Valley south of Egypt, where they became assimilated in speech to the surrounding Nubian population. Many others moved westwards through Kordofan and Dar-Fur to Wadai and the Tsad basin, and, speaking generally, no part of North and North-East Africa, except the Abyssinian uplands, can be said to be entirely free from the Arab element.

Unfortunately this is also the disturbing element, but for the presence of which there would be no fanaticism, no slave-dealers, no Mahdis, no "Egyptian question," to confound the councils of European statesmanship. Proud, ignorant, bigoted, and insolent, these Arab tribes "are for the most part nomads or wanderers, each within certain well-known limits. All are large owners of cattle, camels, horses, and slaves. These last, along with the Arab women generally, cultivate some fields of durra, or corn, sufficient for the wants of the tribe. The Arab himself would consider it a disgrace to practise any manual labour. He is essentially a hunter, a robber, and a warrior, and, after caring for his cattle, devotes all his energies to slave-hunting and war."†

Some of these Arab tribes are very numerous and powerful. They command great influence amongst the surrounding populations, and are often in a position to defy the supreme authority, or compel it to accept their conditions in the administration of Eastern Sudán. The most important are the Shegyeh, Robabat, Jalin, and Kababish, between Dongola and Khartum; the Baqqára," thence southwards nearly to the Sobat confluence; the Homran, Rekhabin, and Alawin of Senaar; the Hamr, El-Homr, Mahamid, and Habanieh of Kordofan and Dar-Fur. In general, the Semitic type is fairly well preserved, although the Shegyeh and some others are distinguished by a dark, almost black, complexion. Traces of intermixture with the Negroes are also evident in many districts, while complete fusion of the two elements seems to have taken place in parts of Senaar and Nubia. In religion all alike are zealous Mohammedans, to whom some system of domestic slavery seems almost indispensable. Hence even were the export of slaves to Egypt and Arabia suppressed, the institution would still survive in a mitigated form in the interior of the country.

(a) HIMYARITIC OR ABYSSINIAN BRANCH.‡

- Dahalaki*. . . Great Dahalak Island, near Massawa.
- Massuai* . . . The mixed population of Massawa, of Tigré speech.

* The position of the Bogos or Bilin, who occupy a debatable tract at the north-east corner of Abyssinia on the Egyptian frontier, is somewhat doubtful. Leo Reinisch regards their speech as a Gheez dialect ("Die Bilin Sprache," Vienna, 1882); yet he classes them subsequently with the neighbouring Hamite peoples, as will be seen farther on.

† Lieut. Colonel Stewart's "Report on the Sudán for 1883," p. 8.

‡ The "Ethiopian" of some, the "Agazi" of other writers, the latter term denoting peoples of Geez speech. "Alle diese Völker haben einen innern Zusammenhang; sie sind Abyssinier, alte Christen,

<i>Hotumla</i> . . .	}	Mudun (Samhar) coast district about Massawa and as far as Aqia.
<i>Karneshin</i> . . .		
<i>Az-Shuma</i> . . .		
<i>Dukono</i> . . .		
<i>Habab</i> . . .	}	Anseba province, north-east frontier of Abyssinia inland from Mudun.
<i>Bejuk</i> . . .		
<i>Mensa</i> . . .		
<i>Bogos (Bilin)*</i> . . .		
<i>Takue</i> . . .		
<i>Marca</i> . . .	}	Beit-Bidel and Dembela districts, about the headstreams of the Barka (Baraka) and Mareb (Gash) rivers, west of Anseba.
<i>Algeden</i> . . .		
<i>Sabderat</i> . . .		
<i>Dembela</i> . . .	}	Abyssinian enclave in Somaliland, east from Shoa: 9° 40' N.; 42° E.
<i>Harrar</i> . . .		
<i>Tigré</i> . . .		
<i>Amhara</i> . . .		
		The predominant nation in North Abyssinia.
		The predominant nation in South Abyssinia, now politically subject to the Tigré.

(b) ISMAELITIC OR ARAB BRANCH.

<i>Sheggyeh (Shaikieh)</i> . . .	From Dongola along left bank Nile to Abu-Hammed. Noted for their extremely dark complexion, yet claiming to be of unmixed Arab descent.
<i>Robabat</i> . . .	From Abu-Hammed to the Atbara confluence.
<i>Hassanieh</i> . . .	About the Atbara confluence, between the Robabat and Jalin north and south.
<i>Homran</i> . . .	Middle course of the Atbara and Mareb rivers as far as the Basé (Kunama) territory.
<i>Abu-Rôf</i> . . .	Widespread throughout West Sennar.
<i>Shukrieh</i> . . .	} Lower and Middle Atbara (left bank), and southwards to Sennar.
<i>Dobeina</i> . . .	
<i>Yemanieh</i> . . .	
<i>Jalin (Jahalin)</i> . . .	Mainly about the Blue Nile confluence, Khartum district; but widely diffused as traders and settlers throughout Sennar, Taka, Kordofan, Dar-Fur, and even Kaffa.†
<i>Kababish</i> ‡ . . .	Widely spread west of the Nile between 12°—15° N., but especially along the route from Obeid (Kordofan) to the Nile at Dongola. The name means "Goat-herds," although they are also large breeders of horses and camels.
<i>Baqqâra</i> . . .	Mainly south of the Kababish along west bank of the Nile and Bahr-el-Arab nearly to its source. The term <i>Baqqâra</i> , unknown in the Arab national genealogies, has given rise to some misunderstanding. It is not the name of any particular tribe, but an expression applied collectively to all tribes which breed and deal in cattle, in contradistinction to those whose wealth consists in horses and camels. Hence there are Baqqâra in many parts of Sudân, although

und bedienen sich des reinsten athiopischen Idioms, des Tigré" (Munziger, *op. cit.* p. 73). This use of the term "Ethiopian" is very confusing, as it is also, and more properly, employed as the collective name of the eastern division of the Hamitic family. The Himyarites (Abyssinians) are intruders from Arabia; the Hamites are the true autochthones, hence best entitled to the title of "Ethiopian," which by the ancients was applied, although somewhat vaguely, to all the native populations stretching south from the frontier of Egypt proper.

* The Bogos are classed by Reinisch (*loc. cit.* p. 94) with the Hamites, or "Kushit a," as he calls them. But he elsewhere rightly affiliates them to the Abyssinian Semites, as speaking a pure Tigré (Geez) dialect, herein agreeing with Munziger in his "Ostafrikanische Studien," who is our best authority on these fragmentary ethnical groups on the north and north-east frontiers of Abyssinia.

† The Jalin claim special consideration as the most numerous, intelligent, and purest of all the Sudanese Arabs. They trace their descent from Abbas, uncle of the Prophet; but their Arabic speech, preserved and spoken with great purity, indicates the Hejas as their original home. The chief Jalin tribes, as enumerated by Munziger, are: Muhammadab, Mikringa Bagelab, Uâdieh, Gebâlab, Kaliab, Gummiab, Gummeab, Gereshab Nifeab, Sadob, Jandallahab, Mekaberab, Meirefab, Mosell-mab, Omarab, Timerab, Kitejab, Giaberab, Aliab, Giuberab, Seidab, Shatinab, Megiadab. The final *ab* of these tribal names is not an Arabic but a Beja patronymic ending, borrowed from the neighbouring Hadendohs of the Mareb Valley, with whom they have long been intimately associated. Some of the Jalin tribes of the Barka district have even adopted the To-Bedawieh language, and pass for Hamites.

‡ "Es ist nicht unmöglich dass die beiden Völker [Kababish and Baqqâra] von einem Stamme entsprossen, sich die Weide vertheilt haben, wodurch die Trennung stereotyp wurde. Die Kuhlärten hielten sich an den grasigen Süden, die Kababish an den trockeneren aber von Mimosen stark bewaldeten Norden, der allein dem Kameel und der Ziege Convenirte." (Munziger, *op. cit.* p. 561.)

they are chiefly concentrated about the left bank of the White Nile, and farther west towards the headstreams of the Bahr-el Arab (Baqqāra-el-Homr). The word is derived from *baqr* = an ox.

<i>Allawin</i> . . .	El-Arish district on the road between Egypt and Palestine.
<i>Amrān</i> . . .	Isthmus of Suez.
<i>Huweitāt</i> . . .	Arabian desert between the Suez Canal and the Nile.
<i>Maazeh</i> . . .	i.e. The "Goatherds," a powerful tribe ranging over the Arabian steppe, from the Nile to the Red Sea, between the parallels of Assiut and Beni-Suef. Have been identified by Maspero with the ancient Libyan Mazu people, but have now been assimilated in speech and religion to the Arabs.
<i>Aulad-Ali</i> . . .	The dominating tribe in the Libyan desert west of the Nile delta.
<i>Hawarah</i> . . .	West of Kench, Upper Egypt; till recently supplied the Khedival Government with most of its irregular cavalry. Total population of all the Arab tribes in Egypt, about 250,000.

V. HAMITIC GROUP.

TIBU BRANCH.

The true affinities of the Tibus, long a subject of discussion among anthropologists, may now be determined in the light of the fresh materials recently brought to Europe by Dr. Nachtigal, and partly published in his monumental work, "*Sahara und Sudán*."* The Tibu domain comprises the whole of East Sahara from about 12° E. longitude to the Egyptian frontier, and from Fezzan southwards to Kanem, Wadai, and Dar-Fur. There are two main branches: 1. The Teda, or Northern Tibus, possibly to be identified with the Tadamansii, a tribe of Garamantes placed by Ptolemy in Tripolitana; 2. The Daza, or Southern Tibus, through whom they gradually merge southwards in the Kanembu, Kanuri, Zoghāwa, Baele, and other Negro or Negroid peoples of Central and Eastern Sudán. The Tibu language follows precisely the same course, passing from the Northern and primitive Teda through the more highly developed Daza to the mixed Kanuri and other forms in the Tsad basin.

But the physical and linguistic features revolve, so to say, in different planes, implying apparent antagonism between the ethnical and philological conditions. Both are found in their purest and most original state amongst the Northern Tedas, a point that has been clearly established by Nachtigal. But while the Teda physical type is not to be distinguished from that of the neighbouring Imoshagh or Tuarik (Berber Hamites) of the Western Sahara, the Teda language shows no affinity either with the Hamitic or the Negro groups. It stands entirely apart, constituting the nucleus of a widespread linguistic family, with extensive ramifications in Dar-Fur, Wadai, Kanem, Bornu, Baghirmi, and generally throughout Central Sudán. In this region it appears to have been profoundly affected by Negro influences; but no such influences can be detected in the Tibesti uplands, probably the cradle of the Tibu race and the centre of dispersion of the Tibu language.

It follows that the Tibus must be regarded as a branch of the Hamitic stock, who, during their long isolation in Tibesti, have had time to develop an independent idiom no longer traceable to a common Tibu-Berber source. A notable feature of this idiom is the absence of grammatical gender, placing it even on a lower level than many Negro tongues of the Upper Nile and Kilima-Njaro regions. It appears, however, to supply what may be called the "raw material," out of which gender has been elaborated in the Hamitic languages. Thus *o* seems to be characteristic of masculine, *d* or *t* of feminine terms, as in *o-mri* = man; *á-di* = woman. With this feminine dental may be compared the Berber *t*, which is both pre- and post-fixed, as in *akli* = negro; *taklit* = negress.

* Two volumes only have so far appeared (Berlin, 1879, 1881). The remainder, with rich philological data, are anxiously awaited by students of African ethnology.

- Baclo* . . . } North Dar-Fur, thence north-westwards to Wanganya and Bosku; speech akin
Ennedi . . . } to the Dasa or Southern Tibu; type Negroid.
Zoghawa . . . }

BERBER BRANCH.

- Fulah* . . . West Dar-Fur, where a few Fulah communities have penetrated in recent times from the Tsad basin.

MASAI BRANCH.

- Masai proper* . . . A widespread and powerful nation, who occupy nearly the whole region east of Lake Victoria Nyanza, between the parallels of Mount Kilimanjaro and Mount Chibcharagnani (3° S.—1° N.) Type quite distinct from the surrounding Bantu and Negro, and apparently allied to the Hamitic Gallas. Language also appears to be remotely connected with the Hamitic family. Twelve main divisions, of which the chief are Ngajé, Molilian, Lyséré, and Leteyo. "These have the finest physical development and—but for a prominence of the cheek-bones, a tendency to a Mongolian shape and upward slant of the eyes, the chocolate-coloured skin, and the hair with a tendency to become frizzy—they might pass muster as very respectable and commonplace Europeans. The Ngajé-Masai are the purest breed, and are to be found chiefly around Kilimanjaro." ("Through Masai Land," p. 413.)
- Kwaf* . . . A sub-branch of the Masai, who seem to have suffered degradation by mixture with the Negro population. Their original home was Mbaravui Land, between Kilimanjaro and U-Sambava, west and east. Since 1830 have been scattered in all directions by the Masai, with whom, however, they now live peaceably in many districts. Some have been evangelised.
- Wa-Sik* . . . Large and powerful nation, north of Masai Land, in the highlands some thirty miles beyond Lake Baringo, and in the northern parts of Lykipia, whence they have expelled the Masai. "They are strong-boned, ugly looking fellows, though their heads are not markedly Negroid." ("Through Masai Land," p. 529.) Joseph Thomson tells us that their language is distinctly allied to the Masai, and this explorer considers that "they doubtless form a connecting link between the latter race and the Nile tribes" (*ib.* p. 531).
- Andorobbo* . . . A hunting tribe scattered in very small communities over Masai Land, especially in the dense forests of Kenia, Kikuyu, the Mau range, Chibcharagnani, and other places where the elephant abounds. In appearance they resemble the lower class of Masai, to whose language their speech is also allied. By the Masai themselves "they are on the whole looked upon as a species of serf, and treated accordingly." ("Through Masai Land," p. 448.)

SOUTH ETHIOPIAN BRANCH.

OROMO OR GALLA.

The word *Omri* may serve in a way to connect the Tibu Hamites with the Galla, a chief branch of the Eastern Hamites, who also call themselves *Oromo*, Orma, Ormu = men. To these Eastern Hamites, who skirt the Indian Ocean and the Red Sea from the Equator to Egypt, and of whom the ancient Egyptians themselves were a branch, the vague terms Cushite and Ethiopian are frequently applied. By the intervening Abyssinian highlands they are divided into a southern and a northern group, the chief branches of the former being the Afars (Dankali), the Somali, Galla, Kaffa,* and outlying Wa-Huma; of the latter, the Saho, Bogos, or Bilin (?), Beja, or Bishari; the old Egyptians, modern Kopts, and Fellahin, besides the Agau and some other scattered communities in Abyssinia.

* At Keren, in the Bogos country, Leo Reinisch tells us that in 1880 he picked up enough of the Kaffa language from three slaves to determine its connection with the Hamitic family. To the same connection he refers the Agumeder and Khamant of Goudar, and some others on the north frontier of Abyssinia, about whose true affinities some doubt still prevails ("Oesterreichische Monatschr. f. den Orient," March 15, 1884, p. 94).

The Wa-huma, to whom the attention of ethnologists has scarcely yet been seriously directed, present some points of great anthropological interest, probably affording a solution of the difficulties connected with the constituent elements of the Bantu races in East Central Africa. Speke had already observed that the chiefs of the Bantu nations about the great lakes were always Wa-Huma, a pastoral people evidently of Galla stock, and originally immigrants from the Galla country. Since then it has been ascertained that several Wa-Huma communities live interspersed amongst the mixed Bantu nations of the lacustrine plateau, and J. M. Schuver was recently informed that the Negro inhabitants of the Afilo country were governed by a Galla aristocracy.*

From these and other indications it seems highly probable that in point of fact the Bantu peoples are fundamentally Negroes in diverse proportions affected by Wa-Huma or Galla, that is Hamitic, elements. The Wa-Huma, who under the name of Wa-Tusi,† are found as far south as the U-nyamezi country, are by recent observers unanimously described as a very fine race, with oval face, straight nose, small mouth, and generally speaking regular Caucasian features. Such a type is found everywhere cropping out amid the surrounding Negroid populations throughout the southern half of the continent, and the conclusion seems irresistible that it should be referred to these Wa-Huma or Hamitic Gallas, probably for ages advancing as conquerors from the north-east into the heart of the continent.

No distinct mention is made of the Wa-Huma speech. It is known, however, to differ from that of the Bantus proper; and when we hear that the late King M'Tesa of U-Ganda spoke Galla as his mother-tongue, and was proud of his Galla ancestors, little doubt can remain on this point. The Wa-Huma are also distinguished by their intense love both of personal freedom and political autonomy, sentiments which are but feebly developed amongst the true Negro populations. Such is their horror of captivity and a foreign yoke, that those who have failed to maintain their independence are no longer regarded as true Wa-Huma. The very women who have the misfortune to fall into the hands of the Arab slave-dealers are looked upon as degraded for ever, and should they escape from bondage, are burnt alive by their own people. Traits of this sort would almost alone suffice to suspect at least a very large infusion of non-Negro blood in the Wa-Huma race. This element we may now trace with some confidence to the Hamites of North-East Africa as its true source.

<i>Ittu</i>	Ittu Mountains, 41°—42° E., 9°—10° N.
<i>Carayu</i>	South-east of Ankober.
<i>Dawari</i>	West from Tajurra Bay.
<i>Wolo</i>	West of Lake Ardibbo.
<i>Worro-Babbo</i>	East of Lakes Ardibbo and Haic.
<i>Latuka</i>	Large nation east side Upper Nile, east of the Bari, south of the Shuli; about 4° N. lat., 39° E. long. Speech akin to the Ilm-Orma (Galla) dialect.
<i>Mecha</i>	South of Gojam.
<i>Raya</i>	} West of Zebul.
<i>Asabo</i>	
<i>Lango</i>	Somerset Nile between Foweira and Magungo.
<i>Wa-Huma</i>	} Intermingled with the Bantu populations of the eastern equatorial regions.
<i>Wa-Tusi</i>	
<i>Sudama</i>	Kaffaland, south-west of Shoa, hitherto wrongly grouped with the Nubas.‡

* "Afilo wurde mir vom Lega-König als ein Negerland bezeichnet, welches von einer Galla-Aristokratie beherrscht wird" (Petermann's Mittheilungen, 1883, v. p. 194).

† And are no doubt also known by other names. Thus the Wa-Taturu shepherds of U-Kerewé Island in Lake Victoria Nyanza appear to belong to the same connection. They are described by Stanley as "light-coloured, straight, thin-nosed, and thin-lipped," in contrast to their Wa-Kerewé neighbours, "a mixture of the Ethiopic and Negro type." ("Through the Dark Continent," vol. i. p. 261.)

‡ The natives of Kaffa, whose affinity to the Gal'as has now been determined by Leo Reinisch, are collectively called Sidama by G. Chiarini in "Memorie della Società Geografica Italiana," i. Part 2, 1878.

SOMALI.

<i>Isa</i>	
<i>Isa-Ishaai-Modoba</i>	} Between Zeilah, Harrar, and Berbera.
<i>Gudabirsi</i>	
<i>Habr-Awal</i>	
<i>Habr-Gerkajis</i>	Uplands south of Berbera.
<i>Gadchursi</i>	
<i>Dalbahantu</i>	} East of Berbera to the Indian Ocean.
<i>Warsangali</i>	
<i>Mijjerthain</i>	

CENTRAL ETHIOPIAN BRANCH.

AFAR (ADAL OR DANAKIL).

<i>Debnet</i>	
<i>Asoba</i>	} Coastlands between Abyssinia and the Red Sea, from Zula Bay to Strait of Bab-el-Mandeb.*
<i>Asa-Inara</i>	
<i>Sidi-Habura</i>	
<i>Galeila</i>	
<i>Khzmir</i>	Lasta district
<i>Agau</i>	Quara district
<i>Agameder</i>	} Gondar district
<i>Khamant</i>	
<i>Falasha</i>	Collective name of numerous communities scattered over Abyssinia; claim Jewish descent, and are often called the "Jews of Abyssinia," but are probably of Agau stock. The Kura, Kudra, or Huaraza, as their language is diversely called, also resembles the Agau. The term <i>Falasha</i> , which in South Abyssinia takes the form of <i>Fenja</i> , is explained to mean "Exile," and lends a colouring to the national tradition that they descended from a certain Menelek, son of Solomon and the Queen of Sheba.
<i>Sako, or Shoko</i>	North-east frontier, Abyssinia.

NORTHERN ETHIOPIAN BRANCH (BEJA DIVISION).

Of the northern group of Ethiopian Hamites by far the most important are the Beja, or Bishari, who have all the greater claim to the consideration of the ethnologist, that their ethnical status has hitherto been persistently ignored alike by British Cabinet Ministers, officials, and newspaper correspondents. They are the unfortunate people, many of whose tribes have recently come into collision with the British forces in the Suakin district, but who continue to be spoken of as "Arabs" by those statesmen who are unable to recognise more than two races in Egyptian Sudan, that is, the Negro and Arab. Thus, on February 27th of the year 1884, the Marquis of Hartington telegraphs to General Graham: "Tell them we are not at war with the Arabs, but must disperse force threatening Suakin." And General Graham himself sends a letter "written in Arabic" to the chiefs of the tribes about Trinkitat and Tokar, in which they are again assumed to be "Arabs." We all remember the ignominious fate of that now historical document, which was set up as a target and riddled by bullets, as some dangerous fetish, by those Hamitic followers of Muhammad Osman Dakanah, whose own language, the To-Bedawieh, differs almost as much from Arabic as does that of the British troops itself. All this immediately preceded the sanguinary engagement of El Teb, and it may be asserted with Sir Stafford Northcote, though for reasons different from those implied by him, that "if the position of England had been such as it ought to have been, we should have had none of the slaughter which then took place." In fact, had a moderate amount of attention been paid by our Foreign Office to the true ethnical conditions in Egyptian Sudan, most of the complications might probably have been avoided that have since arisen in that distracted region. But the necessity for a systematic study of ethnology has not yet made itself apparent to the rulers of the

* Afar appears to be the most general national name, Adal that of the dominant tribe; Danakil (plural *Danakili* and *Danakli*) is the name by which they are known to their Arab and Hamite neighbours. Chiarini (*loc. cit.*) recognises the close relationship of Somali and Galla, but asserts that the Afar language "ha ben poco di comune colla galla."

most multifarious complexity of tribes and peoples ever entrusted to the charge of a single Administration.

The Bejas are the true autochthonous element in East Nubia, where they occupy the whole of the arid steppe-lands stretching from the Nile to the Red Sea, and from the Abyssinian frontier northwards as far as the parallel of Keneh and Kosseir in Upper Egypt.* Their main divisions are the Ababdeh, to be identified with Pliny's Gabadei, about the Egyptian frontier, the Hadendoah, Hassanab, and Demilab, along the coast-lands, and as far inland as the El-Matre wells on the Suakin-Berber route; the Bishari proper, thence westwards to the Nile; the Amarar and Ashraf north from the Suakin-Berber route, and here and there overlapping the Bishari; the Kamlab, Halenga, and Beni-Amer along the Abyssinian frontier from the Nile to the Red Sea in the order here given.

By Linant Bey (Linant de Bellefonds), one of the most intelligent observers of these peoples, they are described as of European (Caucasic) type, often very handsome, of a bronze, swarthy, or light chocolate complexion, with long, crisp, but not woolly hair, generally falling in ringlets over the shoulders.† So also the Macrobes, of the same region, were long ago described by Herodotus (Book III.) as "the tallest and finest of men," to whom Cambyzes sent envoys from their kindred of Elephantine Island, but failed to reduce. Nevertheless, through long contact with the surrounding African populations the present Bejas show here and there evident traces of Negro blood, conspicuous especially in the thick lips and broad nose of some of their tribes. On the other hand, the northern or Ababdeh branch have been largely assimilated even in speech to their Arab neighbours and hereditary foes, the Atûni (Ma'azeh) of Upper Egypt.‡ All are now more or less zealous Mohammedans, occupied chiefly with camel-breeding and as caravan leaders, governed by hereditary sheikhs, and like their Hamitic kindred elsewhere, distinguished by their personal bravery and love of freedom.

Beja, the most collective national name, may be traced through the harder Arabic form *Bega* § of the tenth century to the *Bûga* (Βουγαῖται) of the Greek and Axumite (Geez) inscriptions, and thence perhaps to the *Buka* of the hieroglyphic records. These Βουγαῖται appear to be identical with the βλέμνες (Kopt. Balnemmoui) who are already mentioned by Strabo,|| and who, from the third to the sixth century of the new era, infested the southern frontiers of Egypt. Often defeated by Aurelian and Probus, they nevertheless so continued to harass these outlying provinces of the empire, that Diocletian was at last induced to withdraw the Roman garrisons from the regions of the Cataracts, replacing them by the warlike Nobatæ tribes from the great oasis of Kargey in Upper Egypt.

Hadendoah . . . }
Bishari . . . } Between Suakin and the Nile, thence southwards to the Abyssinian frontier.

* That this region was occupied by the Beja from remote times appears evident from Macrizi, whose account of this people in his "History of Egypt" (end of fourteenth century) is drawn from the Isthakhri (tenth century) and other older records. "Le pays qu'habite ce peuple commence au bourg nommé Kharbah, près duquel est la mine d'émeraude. Le pays des Bedjas se termine aux premières frontières de l'Abyssinie. Ce peuple habite l'intérieur de la presqu'île d'Egypte jusqu'aux bords de la mer, du côté qui regarde les îles de Souaken, de Baza (Massawah), et de Dehlak." (Quatremère's translation, in "Mémoires sur l'Egypte," 1811, ii. p. 135.)

† "L'Etbaye, pays habité par les Bicharieh" (Paris 1868).

‡ These Ababdeh are very widespread, stretching from Keneh southwards to the Second Cataract at Wady-Halfa, where they meet the Kensi Nubians on the west, and the Bishari on the east. Their chief tribes, some of which also appear to speak Nubian, are the Nemrâb, Gawalich, Shawâhir (Kha-wâhi), Abudein, Meleikab, Tokâra, and Oshabab. Russeger ("Reise," ii. Part 3, p. 193) estimates their number at about 40,000, nearly equally distributed between Egypt and Nubia.

§ The Arabic ج, now generally pronounced *j*, was originally hard, like the Hebrew ג, as we see in the geographical term *Nejd*, by the local tribes still pronounced *Negd*. Hence *Bega* = *Beja*.

|| Λοιπὰ δὲ τὰ πρὸς νότον, Τρογλοῦται, βλέμνες, καὶ Νοῦβαι καὶ Μεγάβαροι οἱ ὑπὲρ Σὺννης Αἰθίοπες. (Book 17, § 53.)

<i>Beni-Amar</i> . . .	}	Along north frontier, Abyssinia; both largely affected by Semitic elements, and often wrongly classed with the Abyssinian Himyarites.*
<i>Halenga</i> . . .		
<i>Amarar</i> . . .		Along the coast from Suakin northwards to Ras-Benass, and thence inland.
<i>Ababdeh</i> . . .		Upper Egypt and Arabian Desert, from Kosier southwards to the neighbourhood of Wady-Halfa; partly assimilated to the Arab tribes on their northern frontier.

EGYPTIAN BRANCH.

<i>Retu</i> . . .		The national name of the old Egyptians of Hamitic stock, and probably remotely allied to the Semites; now represented by the Copts and fellahin.
<i>Copts</i> . . .		Centred chiefly in the Assiut district, Upper Egypt, where some villages are entirely occupied by them; elsewhere thinly scattered over the country. Total population about 410,000. All are Christians of the Monophysite sect, but have universally adopted the Arabic language. Coptic, representing the Old Egyptian of the hieroglyphics, has long been extinct, and is now used only as the sacred or liturgical language of the Coptic communities. It was still current throughout Egypt in the tenth century; but since the seventeenth Arabic has been the exclusive language in the country.
<i>Fellahin</i> . . .		The agricultural element in Egypt; are the direct descendants of the ancient Retu or Egyptian stock, but have been largely modified by crossings, especially with the Arab and Syrian Semites, who arrived in large numbers over 4,000 years ago, during the Hyksos dynasty, and who again overran and reduced the whole country under the first Caliphs. In some rural districts the fellahin still take the name of Aulad-Masr, or "Children of Egypt." All are now Mohammedans and speak Arabic exclusively; population about 5,000,000.
<i>Siwaha</i> . . .		The inhabitants of the Siwah Oasis; akin to the Berbers of the Sahara; still speak a Berber dialect; all now Mohammedans.

VI. UNCLASSIFIED GROUPS.

<i>Barea</i> . . .	}	About middle course Mareb and headwaters of the Barka, north frontier Abyssinia; closely related in habits, type, &c., but of different speech (Nerebena and Bazena-aura); apparently the true aborigines of Abyssinia.†
<i>Basé</i> or . . .		
<i>Kunâma</i> . . .		
<i>Birkit</i> . . .	}	Dar-Fur, chiefly towards Wadai frontier; of doubtful affinities (Barth, iii., p. 539).
<i>Masalit</i> . . .		
<i>Ahu-Sarib</i> . . .		
<i>Tala</i> . . .	}	The aborigines of Kordofan, apparently extinct or absorbed in the Tegelé and Nubas.
<i>Bukka</i> . . .		
<i>Assiri</i> . . .		
<i>Tegelé</i> . . .	}	Large nation south Kordofan, usually classed as Nubas, but quite distinct.‡
<i>Tekelé</i> . . .		
<i>Qudeyat</i> . . .		In thirty villages, south and east of Mount Kordofan; said to be of Funj origin.
<i>Musabat</i> . . .	}	Obeid district, Kordofan; claim descent from the Kunjara of Dar-Fur, where some are still found; all now speak Arabic exclusively.
<i>Muserbat</i> . . .		

* The Halenga of the Mareb river are, however, said to be of undoubted Anharic descent.

† "Sie sind wohl der Ueberrest des alten Abyssinischen Reiches vor der Einwanderung der Semiten" (Munziger, *op. cit.* p. 76). The type of the Basé (whose true name is Kunâma), as described and figured by F. L. James ("Wild Tribes of the Sudan," London, 1883), seems distinctly Negroid. In the Preface, p. i, of that work, they are stated to be "of a totally different type, much blacker and more closely allied to the poor Negro than any of their neighbours." Yet Munziger asserts that the "sogenannte Negertypus fehlt" (p. 467). The point must be finally decided by a study of their language, of which nothing appears to be known. Of the Barea there are two divisions, those of the Ilagr district who call themselves Nere, and those of Mogareb. There is no general national name; *Barea*, meaning "slave," being simply an abusive term applied to them by the Abyssinians.

‡ "Die Sprache von Tegelé hat mit dem Nuba nichts gemein; ein genaueres Studium der erstern hat mich Russegger's Classification entgegen, davon überzeugt" (Munziger, "Ostafrikanische Studien," p. 551). The same writer, a personal observer, assures us (p. 557) that there is absolutely nothing of the conventional Negro type about them; and as their language is neither Arabic, Hamitic, nor Nuba, their true position remains still to be determined.



APPENDIX III.

I.—THE EGYPTIAN DYNASTIES.

The subjoined table gives the date of the beginning of each of the old Egyptian dynasties as preserved in Manetho's Chronology, according to the interpretations of M. Mariette, Professor Lepsius, and Sir Gardner Wilkinson.

Dynasties.	Mariette.	Lepsius.	Wilkinson.
	B.C.	B.C.	B.C.
I.	5004	3892	2700
II.	4751	3639	—
III.	4449	3338	—
IV.	4235	3124	2450
V.	3951	2840	—
VI.	3703	2740	2240
	3500	2592	—
	3400	2522	—
	3358	2674	—
	3249	2565	—
XI.	3064	{ 2423	—
XII.		{ 2380	2080
	2851	2136	—
	2398	2167	—
XV.	2214	{ 2101	—
XVI.		{ 1842	—
XVII.		{ 1684	—
XVIII.	1703	1591	1520
XIX.	1462	1443	1340
XX.	1288	1269	1200
XXI.	1110	1091	1085
XXII.	980	961	990
XXIII.	810	787	818
XXIV.	721	729	—
XXV.	715	716	714
XXVI.	665	685	664
XXVII.	527	525	—
XXVIII.	406	425	—
XXIX.	399	399	399
XXX.	378	378	378
Second Persian Conquest . . .	340	340	340

II. SUMMARY OF ANCIENT EGYPTIAN HISTORY WITH DATES ACCORDING TO THE CALCULATIONS OF M. MARIETTE AND DR. BRUGSCH.

ANCIENT EMPIRE.

I. *Dynasty* : THINITE, so called from its capital, THIS, or THINIS.

M.* 5004, B.† 4400 B.C.

MENES (MENA), founder of the city of Memphis and of the Egyptian monarchy. His name is mentioned by all the ancient writers who have dealt with the subject of Egyptian chronology, and their testimony is confirmed by the native documents, in which Menes is always referred to as the founder of the empire. But no monument has been discovered which can be traced back to his reign.

TOTA (ATHOTHIS), of whom there are no records.

USENEPHES I., to whom is attributed the step-pyramid of Saqqarah.

II. *Dynasty* : MEMPHITE, so called from its capital MEMPHIS.

M. 4751, B. 4133.

KAKAU (KATICHOS), during whose reign the worship of Apis was established at Memphis, and that of Mnevis at On (Heliopolis). B. 4100.

III. *Dynasty* : MEMPHITE.

M. 4449, B. 3966.

SNEFRU (SENEFRU), the first king whose name appears inscribed on contemporaneous monuments, amongst which are the Pyramid of Meidum and a bas-relief of Senefru discovered in the Wady Magharah, Sinai Peninsula. These monuments already reveal a state of civilisation as completely developed as at the time of the Persian conquest, with thoroughly original features and all the marks of a long previous existence. The ox, dog, and other useful animals had already been domesticated, and the Egyptian language was completely formed and differentiated from the allied Hamitic and more remotely connected Semitic tongues. B. 3766.

IV. *Dynasty* : MEMPHITE.

M. 4235, B. 3733.

SHUFU (KHUFU), that is Suphis, or Cheops, builder of the great pyramid of Gizeh. M. 4235, B. 3733.

KHAFRA (KHEPHREN), builder of the second pyramid of Gizeh. B. 3666.

* M., Mariette.

† B., Brugsch.

MENKAURA (MYCERINUS), builder of the third pyramid of Gizeh. B. 3633.

During this age history begins to assume shape. The three great pyramids are completed and numerous other monuments erected. Cheops was a war-like prince, whose triumphs over the Arab Bedouins of Sinai are recorded on the bas-reliefs of the Wady Magharah. This era marks the culminating point of primitive Egyptian culture. The country appears to have made great advances in material progress, and the limits of the monarchy were extended southwards to the Cataracts. But the capital was still at Memphis, in the neighbourhood of which was centred all the life and activity of the nation.

V. *Dynasty*: ELEPHANTINE.

M. 3951, B. 3566.

RAENUSER (RATHURES), the first king whose name was inscribed with a double cartouche. B. 3433.

TATKARA (TANKHERES), or ASSA, to whose reign is referred the tomb of Tih at Saqqarah. B. 3366.

UNAS (OBNOS), builder of the so-called Mastabat-el-Faraun, or great truncated pyramid of Saqqarah. B. 3333.

VI. *Dynasty*: MEMPHITE.

M. 3703, B. 3300.

MERIRA PEPI (APAPPUS), whose name occurs on many monuments throughout the whole of Egypt from Sâh to Assuan, as well as in the Sinai Peninsula. He appears to have ruled over all the Lower Nile valley as far as Nubia, and is traditionally said to have reigned for a hundred years. B. 3233.

VII. *Dynasty*: Seat of empire uncertain.

M. 3500, B. 3100.

No known records.

VIII. *Dynasty*: Dates uncertain.

No known records.

IX. *Dynasty*: HERAKLEOPOLITE.

M. 3358.

No known records.

X. *Dynasty*: HERAKLEOPOLITE.

M. 3249.

No known records.

The somewhat legendary Queen Nitocris is supposed to have flourished in this obscure period, of which no monuments are known to exist, and with which the ANCIENT EMPIRE is brought to a close. The first civil troubles begin during the sixth dynasty, when the usurper Akthoes raises the standard of revolt at Herakleopolis in the Delta, and forms a separate state by detaching several provinces from the empire. Queen Nitocris, whose beauty and wisdom are praised by Manetho and Herodotus, endeavours in vain to stem the torrent of revolt which now spreads to the capital itself. She perishes in the attempt, and after her death Egypt remains for upwards of three centuries divided into two kingdoms, one comprising the whole of the Delta, the other the Nile Valley thence to Ethiopia. According to some authorities the ninth and tenth dynasties ruled in the north, the eighth simultaneously in the south. The usurpation of Akthoes was attended by a sudden and hitherto unexplained eclipse in Egyptian culture, and for three centuries there is a complete blank in the native records and monuments. Egypt herself seems to have disappeared as an independent monarchy, and when she awakens again from this long sleep civilisation appears to resume its course almost without any traditions of the past.

MIDDLE EMPIRE.

XI. *Dynasty*: THEBAN.

M. 3064.

ENENTEF, MENTUHOTEP, names apparently borne by several kings of this dynasty alternately. During their rule the seat of empire was removed from Lower to Upper Egypt, where was now founded the great city of Thebes, capital of so many subsequent dynasties.

SANKHARA, the first king who sent an expedition to the land of Ophir and Punt (either Somaliland or South Arabia), as recorded on an inscription in the Wady Hammamat, on the route between Coptos and the Red Sea coast. B. 2400.

The six kings of this dynasty, all of whom reigned at Thebes, had to struggle against the usurpers in the Delta, and apparently against foreign conquerors. They seem to have succeeded in reducing the whole country; but for a long time their authority was restricted to the Thebais. They broke completely with the traditions of the past, and began again to build up the fabric of Egyptian culture almost from its very foundations. Hence their monuments are rude, primitive, sometimes even coarse. The effect they produce on the observer is that of a country reverting to the low state of rude civilisation from which it had already emerged under the first three dynasties.

XII. *Dynasty*: THEBAN.

M. 3064, B. 2466.

AMENEMHAT I., under whose rule Egypt again rose to a high degree of prosperity. M. 3064, B. 2466.

OSORTASEN I., by whom was erected the obelisk still standing at Heliopolis. B. 2433.

AMENEMHAT II., OSORTASEN II., whose exploits are recorded in inscriptions in the tombs of Ameni and Knumhotep, at Beni-Hassan.

OSORTASEN III., who invaded Kush or the land of Ethiopia stretching south from Egypt. Monuments recording his victories are found at Semneh, beyond the second cataract of Wady Halfah. B. 2333.

AMENEMHAT III., who constructed extensive canals, dykes, and reservoirs, by which the inundations of the Nile were regulated. Amongst these vast works was the famous Lake Mœris in the Fayum depression, where this king also laid out the no less famous labyrinth. Records of the periodical risings of the Nile during his reign occur at Semneh, where he established a Nilometer, by means of which regular observations were taken and published throughout Egypt. B. 2300.

All the kings of this dynasty bore the name either of Osortasen or Amenemhat (Amenemheh). They reigned altogether 213 years, and their epoch was one of great prosperity, internal peace, and foreign conquest. They recovered Arabia Petraea, which had been lost during the civil wars, and permanently reduced the whole of Nubia as well as a part of Ethiopia. Their glory was perpetuated by monuments as prodigious and in some respects far more useful than those of the fourth dynasty. Such especially was the vast Lake Mœris, constructed by Amenemhat III. for the purpose of regulating the periodical inundations of the Nile. When the rise was insufficient the waters stored in this enormous reservoir served to irrigate the whole country along the left bank of the river as far as the sea. When the rise was excessive, the overflow from the lake was discharged through a system of sluices into the Birket-Karun.

From the tombs of Beni-Hassan, dating from this epoch, a long inscription has been recovered relating the career and beneficent deeds of Ameni, a high official, who resumes his administration of the land in these words: "All the provinces were cultivated and sown from the north to the south. Nothing was pilfered from my workshops. No little child was ever hurt, no widow oppressed by me. I gave to widow and wedded wife alike, and in all the judgments pronounced by me no preference was shown to the great over the humblest subject of the king."

XIII. *Dynasty* : THEBAN.

M. 2851, B. 2233.

SEBEKHOTEP (SEVERKHOTEP), NEFERHOTEP. Names borne by nearly all the sixty Theban kings of this dynasty.

The rise of the Nile in the third year of Sebekhotep III. is inscribed on the rocks at Semneh. Monuments of this epoch occur at Sâh, Abydos, Siut, Thebes, the first cataract, Semneh, the island of Argo near Dongola, and elsewhere throughout Egypt and Nubia.

The empire thus appears to have been still held together. Nevertheless, almost immediately after the close of the twelfth dynasty the land was again distracted by internal dissensions.

XIV. *Dynasty*: XOITE.

(So named from Xoïs in Lower Egypt, the native place of the reigning family.)

M. 2398.

No known records.

The rule of these northern usurpers was followed by the most tremendous catastrophe recorded in the Egyptian annals, a catastrophe which for a second time arrested the natural development of civilisation in the Nile Valley.

Taking advantage of the rivalry between the royal house of Thebes and the Xoite rulers in the Delta, the nomad tribes of Arabia, Syria, and Mesopotamia overran the whole country, and for a time reduced it under their power. This was the so-called invasion of the Hyksos, or "Shepherds," who overthrew the Middle Empire and set up the three following dynasties. Their capital was fixed at Tanis, near the north-east frontier, where they have left monuments more beautiful and in better taste than those of the contemporaneous dynasties in Thebais.

XV. *Dynasty*: HYKSOS, or the Shepherds.

M. 2214.

No known records.

XVI. *Dynasty*: HYKSOS, or the Shepherds?XVII. *Dynasty*: HYKSOS, or the Shepherds.

B. 1750.

NUB, or NUBTI, during whose reign Joseph, son of Jacob, is said to have arrived in Egypt, where he rose to a high position. The seat of empire of these foreign Shepherd Kings was at Sâh, in the extreme north-east. But contemporaneously with their rule in Lower Egypt and the Sinai Peninsula the native Theban kings appear to have continued to govern in Upper Egypt as tributaries or vassals of the Hyksos. In the Sallier papyrus, now in the British Museum, occurs the name of Rasekenen, a governor of "the southern town" (probably Thebes). An inscription in a tomb at El Kab also records the capture of Avaris, a chief stronghold of the Hyksos, by Ahmes (Amosis), successor of Rasekenen, and first king of the next dynasty.

NEW EMPIRE.

XVIII. *Dynasty*: THEBAN.

M. 1703, B. 1700.

AHMES (AMOSIS), who overthrew the foreign Hyksos invaders, and again raised Egypt to great power under a native dynasty. M. 1703, B. 1700.

AMENHOTEP OR AMUNOPH I. (AMENOPHIS), who continued the victorious career of his predecessor, and extended the limits of the empire beyond the frontiers of Egypt proper. B. 1666.

THOTHMES I. (THOTHMOSIS), a famous conqueror, who overran Syria, and who appears to have first introduced the horse into Egypt. At least no representations of this animal occur on any monuments before his reign. B. 1633.

THOTHMES II., reigned a short time jointly with his sister, Queen Hatasu. B. 1600.

HATASU (HASTOP, MAKARA, AMENNUHET), continued to reign alone after the death of her brother, Thothmes II. She sent a famous expedition to the land of Punt, as commemorated in the sculptures on the walls of Dair-el-Bahri, at Thebes.

THOTMES III., another brother of Hatasu, who reigned some time jointly with her, and for many years alone after her death. He was one of the most renowned of the Egyptian monarchs, who extended his conquests far into Western Asia, and founded the stupendous temple of Karnak at Thebes, covering its walls with inscriptions commemorating his mighty deeds, and giving long lists of the lands and peoples overcome by him. No other name occurs so frequently on monuments and remains of every kind throughout Egypt. B. 1600.

AMENHOTEP II. B. 1566.

THOTHMES IV. B. 1533.

AMENHOTEP III. Another great conqueror, who appears to have advanced the frontiers of the empire far into Ethiopia towards the equatorial regions. His glory is perpetuated by many monuments of a sumptuous character, conspicuous amongst which are those of Luxor and Karnak, besides the famous colossi of Memnon, which bear his name. B. 1500.

AMENHOTEP IV. (OR KHUENATEN?) who under the influence of his mother, a foreigner of Semitic race, attempted to effect a religious revolution, substituting the Semitic divinity Aten (Hormakhu, or the Sun's Orb) for the Theban god Amen. He also removed the seat of government from Thebes to the city of Khuaten, founded by him, and now known by the name of Tell-el-Amarna. His religious system was continued by a few of his successors, but finally abolished by

HOREMHEB (HORUS), who restored the old national worship, and brought back the seat of government to Thebes, effacing as far as possible all traces of his innovating predecessors.

The question has been asked whether the Hebrews, whose numbers had enormously increased during the nine or ten generations since their first arrival in Egypt, played any part in these religious troubles, and especially in the attempt made by Amenhotep IV. to introduce a monotheistic system. It is noteworthy that the beginning of the persecution of the Israelites, as related in the book of Exodus, coincides almost exactly with the restoration of the royal authority and the overthrow of the usurpers. Several incidental circumstances make it highly probable that the Pharaoh "who knew not Joseph" was the undermentioned Sethi I. of the nineteenth dynasty. The cities of Pithom and Ramses, mentioned in the Bible as having been constructed by the children of Israel condemned to forced labour, are also frequently alluded to in the Egyptian records, and by them referred to the time of Ramses II., successor of Sethi I. According to this view the persecution of the Hebrews is easily explained as the natural reaction of the native priesthood when restored to power against the foreign innovators. As might be expected, the theological dissensions ended in the Exodus, that is, in the expulsion of the weaker faction from the land of Egypt.

XIX. *Dynasty: THEBAN.*

M. 1462, B. 1400.

RAMSES I. (RAMESES). M. 1462, B. 1400.

SETHI or MEEPTAH I. (SETHOS), a warlike prince who overran a large part of Western Asia, and constructed the first canal between the Red Sea and the River Nile. Numerous monuments dating from his reign still exist at Karnak, Kurneh, Abydos, and other places, while of all the royal tombs on the left bank of the river at Thebes that of Sethi is in every respect the most remarkable. B. 1366.

RAMSES II., surnamed the Great, the Sesostris of whom so many fabulous events are related by the Greek historians. His triumphs are recorded not only on innumerable monuments in Egypt itself, but also on others raised by him in the countries which he overran. Such is the rock tablet at the mouth of the Nahr-el-Kelb, near Beyrut, in Syria. During his reign of sixty-seven years he erected many famous buildings in Egypt, besides appropriating some of those built by his predecessors, which now bear his cartouche. B. 1333.

The true character of Ramses II. is revealed in the numerous native documents of all kinds which survive from this period. Instead of extending the limits of the empire consolidated by Thothmes III., he scarcely succeeded in keeping it together. During his reign the colossal power built up by the sovereigns of the eighteenth dynasty everywhere shows symptoms of approaching decay. South, north, and west all the nations reduced by the Thothmes and Amenhoteps break out in open revolt against their Egyptian masters. Nubia is agitated, and the walls of the temples are covered with representations of the many victories gained by the viceroys of Ethiopia over the rebels in this region. At the same time the northern provinces are threatened and sometimes hard pressed by the nomad Libyans from the west, and by other strangers with "blue eyes and light hair" descending on the African continent from the islands of the Mediterranean. The reaction against Egyptian supremacy also spreads to Asia, where the warlike Hittites, who fight with chariots, form with many other nations a formidable alliance against Ramses. After eighteen years of incessant warfare Ramses is compelled to make a treaty with the allies, leaving them in possession of all their territories. The terms of the treaty, which is still extant, appear to be much more favourable to the Hittites than to the Egyptian monarch.

The more his history becomes unravelled the less the king shows himself worthy of the surname of "Great" given to him by the early interpreters of the Egyptian records. Enough is already known of his career to justify the conclusion of Lenormant that he was a commonplace individuality, an unbridled despot devoured by an overvaulting ambition, and carrying his vanity so far as, wherever possible, to efface from the monuments the names of their builders and substitute his own.

During his whole reign he lived on the reputation gained by an exploit performed when about twenty years old. Towards the close of the Hittite wars, having fallen into an ambush, he succeeded in rescuing himself and his escort by cutting his way through the ranks of the enemy. This skirmish reappears continually in all the large battle-pieces sculptured on the buildings erected by him. It also forms the subject of a poem, which is the only specimen of Egyptian epic poetry that has survived to our times.

The Book of Exodus stigmatises Ramses as a tyrant in consequence of the persecutions which he inflicted on the Hebrews. But the same judgment will be confirmed by history as soon as all the documents have been interpreted which throw light upon his reign. The Egyptians themselves were heavily oppressed by him, and some contemporary records depict the sufferings, especially of the rural populations, in vivid colours.

SETHI (**MERENPHTAH**, or **MENEPTAH**) II., son and successor of Ramses II., and identified by most Egyptologists with the Pharaoh of the Bible, in whose time the Israelites were led out of Egypt by Moses. His reign began with a formidable invasion of Libyans and their allies, the Achæans Tyrrhenians (Etruscans), Laconians, Sardis, and other Mediterranean populations, who entered Egypt from the north-west, wasted a large portion of the Delta, and attempted to establish an independent state in that region. But they were completely defeated near Prosopis, and thenceforth Merenphtah reigned in peace. But after his death fresh complications arose, and were continued during the reigns of all his successors till the close of the nineteenth dynasty. The so-called Harris Papyrus, now in the British Museum, gives numerous details regarding these intestine and foreign troubles, which were not concluded till the accession of Ramses III.

XX. *Dynasty*: **THERAN**.

M. 1288, B. 1200.

RAMSES III. (the Rhampsinitus of Herodotus), last of the great Egyptian warrior kings, whose famous deeds are commemorated on the walls of the sumptuous edifice erected by him at Medinet-Abu, Thebes. But his own wars were mainly defensive, his efforts being directed against the flood of barbaric invasion dashing with ever-increasing fury against all the frontiers of the empire, and hastening its approaching ruin. The Hittites again succeed in forming a fresh confederation, including even the Teucrians of Troy, besides the Pelasgians of the islands, the Philistines of Cyprus, and the Western Libyans. The empire is now attacked simultaneously from the north, west, and east, the Libyans falling upon the Delta, the Hittites overrunning Syria, while the fleets of the Pelasgians and Teucrians ravage the coast of Palestine. Ramses triumphed by land and sea; nevertheless numerous Libyan tribes secure a permanent footing in the Delta, while the Philistines settle in the districts of Gaza and Ascalon, where a hundred years later the Book of Judges described them as powerful enough to resist the Hebrews advancing from the Jordan.

From the time of Ramses III. Egyptian chronology acquires a sort of mathematical certainty. An astronomical date recorded on a calendar engraved on the walls of Medinet-Abu, and calculated by Biot, fixes the accession of this king in the year 1212 B.C. For the subsequent reigns the inscriptions discovered by Mariette in the tomb of the sacred bulls at Apis determine the number of years, months, and days during which each sovereign occupied the throne.

All the remaining kings of this dynasty appear to have borne the name of Ramses. But with the exception of Ramses VI. and Ramses IX., none

of them were distinguished in the arts of peace or war, and during their rule Egypt continued steadily to decline in power and influence. Within a period of about one hundred and fifty years all the Asiatic provinces of the empire fell off one by one, and were never afterwards recovered. At this time also the high priests of Ammon at Thebes gradually usurped the supreme authority, and ultimately seized the crown itself, although their usurpation was not acknowledged throughout the whole of Egypt.

XXI. *Dynasty*: TANITE.

M. 1110, B. 1100.

HIRON, a high priest of Ammon, was the reputed founder of this dynasty, under which the capital was again shifted northwards to San. During this period the country was for the first time invaded by the Assyrians under their king, Naromath (Nimrod). B. 1100.

XXII. *Dynasty*: BUBASTITE.

M. 980, B. 966.

SHESHONK or SHASHANK (SESONCHIS) I. This is the Shishak of the Bible, son of Nimrod, who overthrew Roboam, king of Judah, captured and plundered Jerusalem, and ruled Egypt, removing the centre of authority to Bubastis in the Delta. His wars against the Jews are commemorated in an inscription on the walls of the great hall at Karnak, where a list is given of the towns and districts conquered or ravaged by him. B. 966.

Most of the princes of this dynasty bear Assyrian names, such as Nimrod, Osorkon (Sargon), and Takeloth (Tiglath). They do not appear to have been independent sovereigns, but rather governors or satraps, appointed by the Assyrian monarchs, or possibly adventurers from the East. It is expressly stated that the father of the first Sheshonk was a captain of armed bands, who came from Syria to seek his fortune in Egypt.

After the overthrow of the priest kings, the preponderance of Thebes ceased for ever. Henceforth all the dynasties belong to Lower Egypt, where they fix their residence. They do not, however, form true dynasties of native princes, but rather a government of Mameluks, like those who afterwards ruled Egypt during mediæval and later times.

The Bubastite dynasty rapidly lost all authority, and after it had ceased to reign, Egypt was for a time divided amongst a number of petty military princes practically independent of the chief monarch.

During this period the descendants of the Theban high priests withdrew to Ethiopia, where they established a powerful state and laid claim to the sovereignty of all Egypt.

PIANEHI, one of these princes, even overran the country, and reduced it for a short time as far as the Mediterranean.

XXIII. *Dynasty*: TANITE.

M. 810, B. 766.

XXIV. *Dynasty: SAITE.*

M. 721, B. 733.

These two dynasties were formed by five kings reigning first at Tanis (San), and afterwards at Sa (Sais). But they enjoyed little more than a nominal authority in the midst of a land torn by internal dissensions and the rivalries of obscure claimants to the sovereign power. The last of them was

BOKEURANEF (BOCCHORIS), the legislator who, according to Manetho, reigned six years and had his residence at Sa. It was probably during his reign that Piankhi overran the country, as recorded on a monument discovered at Jebel-Barkal, near Meroe, in Upper Nubia.

Bokeuranef was finally overthrown and put to death in the year 725 B.C., during another Ethiopian invasion under Shabak, of the following, or

XXV. *Dynasty: ETHIOPIAN.*

M. 715, B. 700.

SHABAK (SABACO), who rules over the whole of Ethiopia and Egypt. B. 700.

SHABATAK, supposed to be the So mentioned in 2 Kings xvii. 4.

TAKARAKA, or TIRHAKAH, also mentioned in 2 Kings xix. 9, as "King of Ethiopia." He was expelled from Lower Egypt by the Assyrians under Esarhaddon, grandson of Sennacherib, as appears from some Cuneiform writings discovered at Nineveh. After Esarhaddon's death the kings set up by him in the north revolted and made common cause with Tirhakah against the Assyrians. This brought on a second invasion under Esarhaddon's son, Assurbanipal, by whom both Tirhakah and his successor

URDAMANEF were conquered and Thebes captured and half ruined.

During these disastrous wars Egypt is wasted by invading hosts from east and south, and after the overthrow of Urdamaneh the northern provinces remain subject to Assyrian rule, the southern to the Ethiopians. The Assyrian monarch, however, did not govern the country directly through provincial satraps, but divided the whole of Lower Egypt amongst twelve native princes, his vassals, who paid him tribute and were overawed by Assyrian garrisons maintained in the chief strongholds. It is this period of government by twelve tributary kinglets to which the Greek historians apply the term *Dodecarchy*.

An oracle had foretold that the whole of Egypt would ultimately fall to the lot of whatever prince should offer libations to the god Phtah, tutelary deity of Memphis, in a brazen vessel. One day while the twelve vassals were sacrificing in the temple the high priest presented to them the golden vases which they were accustomed to employ on these occasions. But by an oversight he brought eleven only for the twelve princes. Thereupon Psammeticus, Prince of Sais, who had probably arranged the matter beforehand, took his brazen helmet and used it to pour out his libations. But for a time the jealousy of his rivals compelled him to withdraw to the swamps of the Delta. Then courting the assistance of Greek and Carian

adventurers, by their means he reduced all the other kings of Lower Egypt, vanquishing them at the decisive battle of Momemphis. He followed up this success by throwing off the yoke of the Assyrian monarchs, and after expelling the Ethiopians from the Thebais, once more established a united Egypt from the Mediterranean to the Nubian frontier. Thus was founded the

XXVI. *Dynasty*: SAITE.

M. 665, B. 666.

PSAMMETICHUS (PSAMETIK) I., under whom the Greeks for the first time obtained a permanent footing in Lower Egypt, chiefly as mercenaries and traders in the Mediterranean seaports. B. 666. He encouraged foreign trade, established continuous relations with Greece and Phœnicia, and thus broke away from the old traditions of isolation and seclusion which had formed the guiding principle in the policy of the native sovereigns for many generations.

NECHO (NECO), son of Psametik I., who equipped a fleet to circumnavigate Africa, and attempted to reopen Sethi's canal between the Nile and the Red Sea. He warred at first successfully against the Assyrians, overthrowing their ally Josiah, King of Judah, at the battle of Megiddo; but was himself ultimately defeated by Nebuchadnezzar at Kar-Khemish, in the Euphrates Valley. B. 612. But this check was compensated by a great increase of internal prosperity and the development of commercial relations with the surrounding nations. In his time the native arts and industries again experienced a short and last revival on the banks of the Nile.

PSAMMETICHUS II. B. 596.

HOPHRA (UAHBRA), or **APRIES**, son of Psammetichus II., during whose reign many Jews settled in Egypt. He went to the aid of Zedekiah, who was besieged by Nebuchadnezzar; but afterwards withdrew, allowing the Babylonians to capture the city and destroy the kingdom of Judah. His fleets gained some considerable triumphs in the Syrian waters; but he was afterwards completely defeated in a war against the Greeks of Cyrene, who had already acquired great political power. Thereupon his army revolted, and proclaimed king his general Ahmes. Hophra was dethroned and put to death by the rebels in 571 B.C.

AHMES (AMASIS), under whose long and flourishing reign Egypt recovered much of her former greatness. Amasis was a fortunate and able ruler, who distinguished himself in the arts of war and peace. He even extended the limits of the monarchy by the acquisition of the island of Cyprus, which had been successively subject to the Assyrian and Babylonian empires. Of all the kings of this dynasty Ahmes most favoured the Greeks, and during his reign they were encouraged by many privileges to settle in the country. In the Delta was now founded the Hellenic city of Naucratis, whose prosperity already foreshadowed that of the neighbouring Alexandria.

Nevertheless this momentary revival of the ancient glories of the Egyptian empire could scarcely disguise the inherent weakness and decay of the national

institutions. Based exclusively on conservative principles and on the spirit of seclusion, the Egyptian civilisation could maintain its ground only by continuing changeless. As soon as it came in direct contact with the outer world, and especially with the spirit of progress as personified in the Hellenic race and culture, it was doomed to perish.

The military caste having nearly all migrated southwards, the nation remained disarmed and at the mercy of foreign conquerors. Strangers detested by the people had been entrusted with the defence of the empire, and public discontent gradually broke into open revolt.

A daring adventurer had already siezed the throne, establishing the twenty-sixth dynasty, and he had found the country so ripe for change that he showed himself even more favourably disposed than his predecessors to the foreigners. For a time this policy tended to enrich the nation by the development of its commercial relations with the neighbouring states. But it ended by exciting the cupidity of the foreign settlers and mercenaries. When these turned their arms against their employers, Egypt had nothing to oppose to them except an unarmed multitude unaccustomed to military service. Hence soon after the accession of

PSAMMETICHUS III., son of Ahmes, a single campaign sufficed to extinguish the political independence of Egypt. This sovereign was overthrown at Pelusium, on the north-east frontier, by Cambyses, King of Persia, who speedily reduced the whole country to the position of a Persian satrapy, 528 B.C.

XXVII. *Dynasty* : PERSIAN.

M. and B. 527.

CAMBYSES. 527.

Darius Hystaspes. 521.

Xerxes I. 486.

Artaxerxes Longimanus. 465.

Darius Nothos.

XXVIII. *Dynasty* : SAITE.

M. and B. 406.

AMYRTÆUS, who succeeded in expelling the Persians and restoring the ancient Egyptian monarchy, fixing his capital at Sa. Reigned six years.

XXIX. *Dynasty* : MENDESIAN.

M. and B. 399.

NAIFAURUT (NEPHERITES) I.

HAKOR (ACHORIS).

PSEMAUT (PSAMMUTHIS).

NAIFAURUT II.

This short dynasty (399—378) maintained the national independence, and ruled the whole country from its capital, Mendes, in Lower Egypt.

XXX. *Dynasty* : SEBBENYTE.

M. and B. 378.

NECTANEBO I. Defeated the Persians and ruled for eighteen years in peace.

TACHOS, who, aided by the Spartans under Agesilaus, repelled the Persian invasion conducted by Artaxerxes Mnemon.

NECTANEBO II., last native king of Egypt, overthrown by Artaxerxes Ochus, who restored the Persian rule, reducing the country to a Persian satrapy. Since then Egypt never recovered her political independence, and has been governed by foreigners or foreign dynasties.

XXXI. *Dynasty* : PERSIAN.

M. and B. 340.

Artaxerxes Ochus.

Darius III. (Codomanus), overthrown by Alexander the Great.

XXXII. *Dynasty* : MACEDONIAN.

332.

ALEXANDER, founded Alexandria.

XXXIII. *Dynasty* : GREEK OR PTOLEMAIC.

305.

PTOLEMY LAGUS or SOTER, natural son of Philip of Macedon, and one of the best generals of Alexander, soon after whose death he founded the Lagide or Greek dynasty, which comprised the whole of Egypt, Libya, and part of Arabia. To these possessions after the death of Perdiccas were added Coele-Syria, Phœnicia, Judæa, and the island of Cyprus. He made Alexandria the capital of his empire, and here he built the famous Pharos or lighthouse, one of the "seven wonders" of the ancient world. He was a great patron of letters and founder of the academy and museum of Alexandria.

PTOLEMY PHILADELPHUS, 286, son and successor of Ptolemy Soter, surnamed Philadelphus, or "brother-loving," in irony from the circumstance that he put to death two of his brothers; developed commercial enterprise, encouraged literature, and caused the Hebrew Bible to be translated into Greek in the still extant version known as the Septuagint.

PTOLEMY EUERGETES I., 247, son of Ptolemy Philadelphus, who in a war declared against Seleucus Callinicus, overran Syria and Cilicia. But his victorious career was arrested by a revolt of his Egyptian subjects, which, however, was soon suppressed. The title of Euergetes, or "Benefactor," was earned by his prudent and beneficent administration.

PTOLEMY PHILOPATOR, 222, ironically named the "father-loving," for his cruelty in putting to death his father, as well as his mother, brother, sister, and uncle. He also at first persecuted the Jews, exposing them, as is said, to the fury of his elephants. But when these animals instead of de-

stroying his intended victims turned upon his own subjects, he conceived a great respect for the Jewish people, loading them with many favours.

PTOLEMY EPIPHANES, 205, or the "Illustrious," succeeded his father, Philopator, at the age of fourteen, and during his minority was compelled to cede many of his possessions to the victorious Antiochus the Great, King of Syria. These, however, were afterwards restored as a dowry when Antiochus gave his daughter in marriage to Ptolemy.

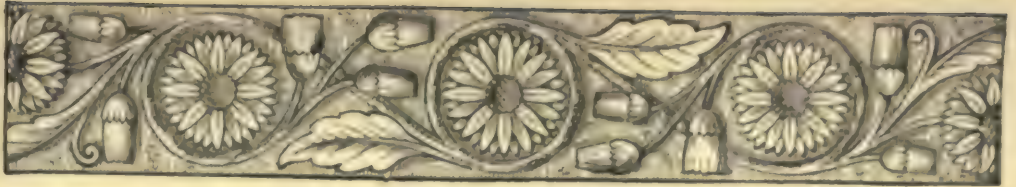
PTOLEMY PHILOMETOR, 182, son of Ptolemy Epiphanes, who in a war with Antiochus Epiphanes was taken prisoner and held captive in Syria. Thereupon the Egyptians raised his brother Physcon to the throne; but he was deposed and Philometor restored by Antiochus.

PTOLEMY PHYSCON, 146, brother of Philometor, after whose death he again ascended the throne. He was a detestable tyrant, who on two occasions ordered a general massacre of the citizens of Alexandria, and put his own son Memphitis to death.

PTOLEMY LATHYRUS, 117, so called from an excrescence on his nose resembling a pea, son of Ptolemy Physcon, who soon after his accession was banished to Cyprus by his mother Cleopatra. The crown was then bestowed on his brother Ptolemy Alexander, after whose death Lathyrus resumed the sceptre. He invaded Judæa, and wasted the country with fire and sword.

PTOLEMY AULETES, 81, that is, the "flute-player," illegitimate son of Lathyrus, surrendered Cyprus to the Romans, also agreeing to pay them a large tribute. This caused a revolt amongst his subjects, by whom his daughter Berenice was placed on the throne. But by the assistance of his allies Auletes recovered possession of his estates, and put Berenice to death.

PTOLEMY BACCHUS, or **DIONYSIUS**, 51, son of Auletes, reigned jointly with his sister **CLEOPATRA**, whom he married in accordance with the will of his father. In his time Pompey, after the battle of Pharsalia, fled to Egypt, and was murdered on landing at Alexandria. In the war that ensued with the Romans he was defeated and drowned in the Nile. Cleopatra was then reseatd on the throne by Cæsar, and reigned jointly with a younger brother, Ptolemy, whom, however, she afterwards poisoned. After the battle of Actium she avoided falling into the hands of Octavius by committing suicide. With her the dynasty of the Ptolemies ended, and Egypt became a Roman province under the Emperor Augustus. Since then the country has continued to be ruled by foreigners or by foreign dynasties.



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